









# MACHINERY'S MATHEMATICAL TABLES

Most Commonly used Tables Selected from  
MACHINERY'S Handbook, which Contains  
1592 Pages of Tabulated Data and Specific  
Information for Mechanical Engineers,  
Machine Designers, Draftsmen, Toolmakers  
and Machinists

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NEW YORK

THE INDUSTRIAL PRESS

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NEW YORK

PRINTED IN THE UNITED STATES OF AMERICA

# TABLES SELECTED FROM MACHINERY'S HANDBOOK FOR MACHINE SHOP AND DRAFTING ROOM

## MATHEMATICAL TABLES

### Square and Cube Roots of Decimal Numbers

Decimal	Square Root	Cube Root	Decimal	Square Root	Cube Root	Decimal	Square Root	Cube Root
0.01	0.1000	0.2154	0.34	0.5831	0.6980	0.67	0.8185	0.8750
0.02	0.1414	0.2714	0.35	0.5916	0.7047	0.68	0.8246	0.8794
0.03	0.1732	0.3107	0.36	0.6000	0.7114	0.69	0.8307	0.8837
0.04	0.2000	0.3420	0.37	0.6083	0.7179	0.70	0.8367	0.8879
0.05	0.2236	0.3684	0.38	0.6164	0.7243	0.71	0.8426	0.8921
0.06	0.2449	0.3915	0.39	0.6245	0.7306	0.72	0.8485	0.8963
0.07	0.2646	0.4121	0.40	0.6325	0.7368	0.73	0.8544	0.9004
0.08	0.2828	0.4309	0.41	0.6403	0.7429	0.74	0.8602	0.9045
0.09	0.3000	0.4481	0.42	0.6481	0.7489	0.75	0.8660	0.9086
0.10	0.3162	0.4642	0.43	0.6557	0.7548	0.76	0.8718	0.9126
0.11	0.3317	0.4791	0.44	0.6633	0.7606	0.77	0.8775	0.9166
0.12	0.3464	0.4932	0.45	0.6708	0.7663	0.78	0.8832	0.9205
0.13	0.3606	0.5066	0.46	0.6782	0.7719	0.79	0.8888	0.9244
0.14	0.3742	0.5192	0.47	0.6856	0.7775	0.80	0.8944	0.9283
0.15	0.3873	0.5313	0.48	0.6928	0.7830	0.81	0.9000	0.9322
0.16	0.4000	0.5419	0.49	0.7000	0.7884	0.82	0.9055	0.9360
0.17	0.4123	0.5540	0.50	0.7071	0.7937	0.83	0.9110	0.9398
0.18	0.4243	0.5646	0.51	0.7141	0.7990	0.84	0.9165	0.9435
0.19	0.4359	0.5749	0.52	0.7211	0.8041	0.85	0.9220	0.9473
0.20	0.4472	0.5848	0.53	0.7280	0.8093	0.86	0.9274	0.9510
0.21	0.4583	0.5944	0.54	0.7348	0.8143	0.87	0.9327	0.9546
0.22	0.4690	0.6037	0.55	0.7416	0.8193	0.88	0.9381	0.9583
0.23	0.4796	0.6127	0.56	0.7483	0.8243	0.89	0.9434	0.9619
0.24	0.4899	0.6214	0.57	0.7550	0.8291	0.90	0.9487	0.9655
0.25	0.5000	0.6300	0.58	0.7616	0.8340	0.91	0.9539	0.9691
0.26	0.5099	0.6383	0.59	0.7681	0.8387	0.92	0.9592	0.9726
0.27	0.5196	0.6463	0.60	0.7746	0.8434	0.93	0.9644	0.9761
0.28	0.5292	0.6542	0.61	0.7810	0.8481	0.94	0.9695	0.9796
0.29	0.5385	0.6619	0.62	0.7874	0.8527	0.95	0.9747	0.9830
0.30	0.5477	0.6694	0.63	0.7937	0.8573	0.96	0.9798	0.9865
0.31	0.5568	0.6768	0.64	0.8000	0.8618	0.97	0.9849	0.9899
0.32	0.5657	0.6840	0.65	0.8062	0.8662	0.98	0.9899	0.9933
0.33	0.5745	0.6910	0.66	0.8124	0.8707	0.99	0.9950	0.9967

## MATHEMATICAL TABLES

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1	1	1	1.00000	1.00000	1.0000000	1
2	4	8	1.41421	1.25992	0.5000000	2
3	9	27	1.73205	1.44225	0.3333333	3
4	16	64	2.00000	1.58740	0.2500000	4
5	25	125	2.23607	1.70998	0.2000000	5
6	36	216	2.44949	1.81712	0.1666667	6
7	49	343	2.64575	1.91293	0.1428571	7
8	64	512	2.82843	2.00000	0.1250000	8
9	81	729	3.00000	2.08008	0.1111111	9
10	100	1,000	3.16228	2.15443	0.1000000	10
11	121	1,331	3.31662	2.22398	0.0909091	11
12	144	1,728	3.46410	2.28943	0.0833333	12
13	169	2,197	3.60555	2.35133	0.0769231	13
14	196	2,744	3.74166	2.41014	0.0714286	14
15	225	3,375	3.87298	2.46621	0.0666667	15
16	256	4,096	4.00000	2.51984	0.0625000	16
17	289	4,913	4.12311	2.57128	0.0588235	17
18	324	5,832	4.24264	2.62074	0.0555556	18
19	361	6,859	4.35890	2.66840	0.0526316	19
20	400	8,000	4.47214	2.71442	0.0500000	20
21	441	9,261	4.58258	2.75892	0.0476190	21
22	484	10,648	4.69042	2.80204	0.0454545	22
23	529	12,167	4.79583	2.84387	0.0434783	23
24	576	13,824	4.89898	2.88450	0.0416667	24
25	625	15,625	5.00000	2.92402	0.0400000	25
26	676	17,576	5.09902	2.96250	0.0384615	26
27	729	19,683	5.19615	3.00000	0.0370370	27
28	784	21,952	5.29150	3.03659	0.0357143	28
29	841	24,389	5.38516	3.07232	0.0344828	29
30	900	27,000	5.47723	3.10723	0.0333333	30
31	961	29,791	5.56776	3.14138	0.0322581	31
32	1,024	32,768	5.65685	3.17480	0.0312500	32
33	1,089	35,937	5.74456	3.20753	0.0303030	33
34	1,156	39,304	5.83095	3.23961	0.0294118	34
35	1,225	42,875	5.91608	3.27107	0.0285714	35
36	1,296	46,656	6.00000	3.30193	0.0277778	36
37	1,369	50,653	6.08276	3.33222	0.0270270	37
38	1,444	54,872	6.16441	3.36198	0.0263158	38
39	1,521	59,319	6.24500	3.39121	0.0256410	39
40	1,600	64,000	6.32456	3.41995	0.0250000	40
41	1,681	68,921	6.40312	3.44822	0.0243902	41
42	1,764	74,088	6.48074	3.47603	0.0238095	42
43	1,849	79,507	6.55744	3.50340	0.0232558	43
44	1,936	85,184	6.63325	3.53035	0.0227273	44
45	2,025	91,125	6.70820	3.55689	0.0222222	45
46	2,116	97,336	6.78233	3.58305	0.0217391	46
47	2,209	103,823	6.85565	3.60883	0.0212766	47
48	2,304	110,592	6.92820	3.63424	0.0208333	48
49	2,401	117,649	7.00000	3.65931	0.0204082	49
50	2,500	125,000	7.07107	3.68403	0.0200000	50



Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
51	2,601	132,651	7.14143	3.70843	0.0196078	51
52	2,704	140,608	7.21110	3.73251	0.0192308	52
53	2,809	148,877	7.28011	3.75629	0.0188679	53
54	2,916	157,464	7.34847	3.77976	0.0185185	54
55	3,025	166,375	7.41620	3.80295	0.0181818	55
56	3,136	175,616	7.48331	3.82586	0.0178571	56
57	3,249	185,193	7.54983	3.84850	0.0175439	57
58	3,364	195,112	7.61577	3.87088	0.0172414	58
59	3,481	205,379	7.68115	3.89300	0.0169492	59
60	3,600	216,000	7.74597	3.91487	0.0166667	60
61	3,721	226,981	7.81025	3.93650	0.0163934	61
62	3,844	238,328	7.87401	3.95789	0.0161290	62
63	3,969	250,047	7.93725	3.97906	0.0158730	63
64	4,096	262,144	8.00000	4.00000	0.0156250	64
65	4,225	274,625	8.06226	4.02073	0.0153846	65
66	4,356	287,496	8.12404	4.04124	0.0151515	66
67	4,489	300,763	8.18535	4.06155	0.0149254	67
68	4,624	314,432	8.24621	4.08166	0.0147059	68
69	4,761	328,509	8.30662	4.10157	0.0144928	69
70	4,900	343,000	8.36660	4.12129	0.0142857	70
71	5,041	357,911	8.42615	4.14082	0.0140845	71
72	5,184	373,248	8.48528	4.16017	0.0138889	72
73	5,329	389,017	8.54400	4.17934	0.0136986	73
74	5,476	405,224	8.60233	4.19834	0.0135135	74
75	5,625	421,875	8.66025	4.21716	0.0133333	75
76	5,776	438,976	8.71780	4.23582	0.0131579	76
77	5,929	456,533	8.77496	4.25432	0.0129870	77
78	6,084	474,552	8.83176	4.27266	0.0128205	78
79	6,241	493,039	8.88819	4.29084	0.0126582	79
80	6,400	512,000	8.94427	4.30887	0.0125000	80
81	6,561	531,441	9.00000	4.32675	0.0123457	81
82	6,724	551,368	9.05539	4.34448	0.0121951	82
83	6,889	571,787	9.11043	4.36207	0.0120482	83
84	7,056	592,704	9.16515	4.37952	0.0119048	84
85	7,225	614,125	9.21954	4.39683	0.0117647	85
86	7,396	636,056	9.27362	4.41400	0.0116279	86
87	7,569	658,503	9.32738	4.43105	0.0114943	87
88	7,744	681,472	9.38083	4.44797	0.0113636	88
89	7,921	704,969	9.43398	4.46475	0.0112360	89
90	8,100	729,000	9.48683	4.48140	0.0111111	90
91	8,281	753,571	9.53939	4.49794	0.0109890	91
92	8,464	778,688	9.59166	4.51436	0.0108696	92
93	8,649	804,357	9.64365	4.53065	0.0107527	93
94	8,836	830,584	9.69536	4.54684	0.0106383	94
95	9,025	857,375	9.74679	4.56290	0.0105263	95
96	9,216	884,736	9.79796	4.57886	0.0104167	96
97	9,409	912,673	9.84886	4.59470	0.0103093	97
98	9,604	941,192	9.89949	4.61044	0.0102041	98
99	9,801	970,299	9.94987	4.62607	0.0101010	99
100	10,000	1,000,000	10.00000	4.64159	0.0100000	100

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
101	10,201	1,030,301	10.0499	4.65701	0.0099010	101
102	10,404	1,061,208	10.0995	4.67233	0.0098039	102
103	10,609	1,092,727	10.1489	4.68755	0.0097087	103
104	10,816	1,124,864	10.1980	4.70267	0.0096154	104
105	11,025	1,157,625	10.2470	4.71769	0.0095238	105
106	11,236	1,191,016	10.2956	4.73262	0.0094340	106
107	11,449	1,225,043	10.3441	4.74746	0.0093458	107
108	11,664	1,259,712	10.3923	4.76220	0.0092593	108
109	11,881	1,295,029	10.4403	4.77686	0.0091743	109
110	12,100	1,331,000	10.4881	4.79142	0.0090909	110
111	12,321	1,367,631	10.5357	4.80590	0.0090090	111
112	12,544	1,404,928	10.5830	4.82028	0.0089286	112
113	12,769	1,442,897	10.6301	4.83459	0.0088496	113
114	12,996	1,481,544	10.6771	4.84881	0.0087719	114
115	13,225	1,520,875	10.7238	4.86294	0.0086957	115
116	13,456	1,560,896	10.7703	4.87700	0.0086207	116
117	13,689	1,601,613	10.8167	4.89097	0.0085470	117
118	13,924	1,643,032	10.8628	4.90487	0.0084746	118
119	14,161	1,685,159	10.9087	4.91868	0.0084034	119
120	14,400	1,728,000	10.9545	4.93242	0.0083333	120
121	14,641	1,771,561	11.0000	4.94609	0.0082645	121
122	14,884	1,815,848	11.0454	4.95968	0.0081967	122
123	15,129	1,860,867	11.0905	4.97319	0.0081301	123
124	15,376	1,906,624	11.1355	4.98663	0.0080645	124
125	15,625	1,953,125	11.1803	5.00000	0.0080000	125
126	15,876	2,000,376	11.2250	5.01330	0.0079365	126
127	16,129	2,048,383	11.2694	5.02653	0.0078740	127
128	16,384	2,097,152	11.3137	5.03968	0.0078125	128
129	16,641	2,146,689	11.3578	5.05277	0.0077519	129
130	16,900	2,197,000	11.4018	5.06580	0.0076923	130
131	17,161	2,248,091	11.4455	5.07875	0.0076336	131
132	17,424	2,299,968	11.4891	5.09164	0.0075758	132
133	17,689	2,352,637	11.5326	5.10447	0.0075188	133
134	17,956	2,406,104	11.5758	5.11723	0.0074627	134
135	18,225	2,460,375	11.6190	5.12993	0.0074074	135
136	18,496	2,515,456	11.6619	5.14256	0.0073529	136
137	18,769	2,571,353	11.7047	5.15514	0.0072993	137
138	19,044	2,628,072	11.7473	5.16765	0.0072464	138
139	19,321	2,685,619	11.7898	5.18010	0.0071942	139
140	19,600	2,744,000	11.8322	5.19249	0.0071429	140
141	19,881	2,803,221	11.8743	5.20483	0.0070922	141
142	20,164	2,863,288	11.9164	5.21710	0.0070423	142
143	20,449	2,924,207	11.9583	5.22932	0.0069930	143
144	20,736	2,985,984	12.0000	5.24148	0.0069444	144
145	21,025	3,048,625	12.0416	5.25359	0.0068966	145
146	21,316	3,112,136	12.0830	5.26564	0.0068493	146
147	21,609	3,176,523	12.1244	5.27763	0.0068027	147
148	21,904	3,241,792	12.1655	5.28957	0.0067568	148
149	22,201	3,307,949	12.2066	5.30146	0.0067114	149
150	22,500	3,375,000	12.2474	5.31329	0.0066667	150

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
151	22,801	3,442,951	12.2882	5.32507	0.0066225	151
152	23,104	3,511,808	12.3288	5.33680	0.0065789	152
153	23,409	3,581,577	12.3693	5.34848	0.0065359	153
154	23,716	3,652,264	12.4097	5.36011	0.0064935	154
155	24,025	3,723,875	12.4499	5.37169	0.0064516	155
156	24,336	3,796,416	12.4900	5.38321	0.0064103	156
157	24,649	3,869,893	12.5300	5.39469	0.0063694	157
158	24,964	3,944,312	12.5698	5.40612	0.0063291	158
159	25,281	4,019,679	12.6095	5.41750	0.0062893	159
160	25,600	4,096,000	12.6491	5.42884	0.0062500	160
161	25,921	4,173,281	12.6886	5.44012	0.0062112	161
162	26,244	4,251,528	12.7279	5.45136	0.0061728	162
163	26,569	4,330,747	12.7671	5.46256	0.0061350	163
164	26,896	4,410,944	12.8062	5.47370	0.0060976	164
165	27,225	4,492,125	12.8452	5.48481	0.0060606	165
166	27,556	4,574,296	12.8841	5.49586	0.0060241	166
167	27,889	4,657,463	12.9228	5.50688	0.0059880	167
168	28,224	4,741,632	12.9615	5.51785	0.0059524	168
169	28,561	4,826,809	13.0000	5.52877	0.0059172	169
170	28,900	4,913,000	13.0384	5.53966	0.0058823	170
171	29,241	5,000,211	13.0767	5.55050	0.0058480	171
172	29,584	5,088,448	13.1149	5.56130	0.0058140	172
173	29,929	5,177,717	13.1529	5.57205	0.0057803	173
174	30,276	5,268,024	13.1909	5.58277	0.0057471	174
175	30,625	5,359,375	13.2288	5.59344	0.0057143	175
176	30,976	5,451,776	13.2665	5.60408	0.0056818	176
177	31,329	5,545,233	13.3041	5.61467	0.0056497	177
178	31,684	5,639,752	13.3417	5.62523	0.0056180	178
179	32,041	5,735,339	13.3791	5.63574	0.0055866	179
180	32,400	5,832,000	13.4164	5.64622	0.0055556	180
181	32,761	5,929,741	13.4536	5.65665	0.0055249	181
182	33,124	6,028,568	13.4907	5.66705	0.0054945	182
183	33,489	6,128,487	13.5277	5.67741	0.0054645	183
184	33,856	6,229,504	13.5647	5.68773	0.0054348	184
185	34,225	6,331,625	13.6015	5.69802	0.0054054	185
186	34,596	6,434,856	13.6382	5.70827	0.0053763	186
187	34,969	6,539,203	13.6748	5.71848	0.0053476	187
188	35,344	6,644,672	13.7113	5.72865	0.0053191	188
189	35,721	6,751,269	13.7477	5.73879	0.0052910	189
190	36,100	6,859,000	13.7840	5.74890	0.0052632	190
191	36,481	6,967,871	13.8203	5.75897	0.0052356	191
192	36,864	7,077,888	13.8564	5.76900	0.0052083	192
193	37,249	7,189,057	13.8924	5.77900	0.0051813	193
194	37,636	7,301,384	13.9284	5.78896	0.0051546	194
195	38,025	7,414,875	13.9642	5.79889	0.0051282	195
196	38,416	7,529,536	14.0000	5.80879	0.0051020	196
197	38,809	7,645,373	14.0357	5.81865	0.0050761	197
198	39,204	7,762,392	14.0712	5.82849	0.0050505	198
199	39,601	7,880,599	14.1067	5.83827	0.0050251	199
200	40,000	8,000,000	14.1421	5.84804	0.0050000	200

## MATHEMATICAL TABLES

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
201	40,401	8,120,601	14.1774	5.85777	0.0049751	201
202	40,804	8,242,408	14.2127	5.86747	0.0049505	202
203	41,209	8,365,427	14.2478	5.87713	0.0049261	203
204	41,616	8,489,664	14.2829	5.88677	0.0049020	204
205	42,025	8,615,125	14.3178	5.89637	0.0048780	205
206	42,436	8,741,816	14.3527	5.90594	0.0048544	206
207	42,849	8,869,743	14.3875	5.91548	0.0048309	207
208	43,264	8,998,912	14.4222	5.92499	0.0048077	208
209	43,681	9,129,329	14.4568	5.93447	0.0047847	209
210	44,100	9,261,000	14.4914	5.94392	0.0047619	210
211	44,521	9,393,931	14.5258	5.95334	0.0047393	211
212	44,944	9,528,128	14.5602	5.96273	0.0047170	212
213	45,369	9,663,597	14.5945	5.97209	0.0046948	213
214	45,796	9,800,344	14.6287	5.98142	0.0046729	214
215	46,225	9,938,375	14.6629	5.99073	0.0046512	215
216	46,656	10,077,696	14.6969	6.00000	0.0046296	216
217	47,089	10,218,313	14.7309	6.00925	0.0046083	217
218	47,524	10,360,232	14.7648	6.01846	0.0045872	218
219	47,961	10,503,459	14.7986	6.02765	0.0045662	219
220	48,400	10,648,000	14.8324	6.03681	0.0045455	220
221	48,841	10,793,861	14.8661	6.04594	0.0045249	221
222	49,284	10,941,048	14.8997	6.05505	0.0045045	222
223	49,729	11,089,567	14.9332	6.06413	0.0044843	223
224	50,176	11,239,424	14.9666	6.07318	0.0044643	224
225	50,625	11,390,625	15.0000	6.08220	0.0044444	225
226	51,076	11,543,176	15.0333	6.09120	0.0044248	226
227	51,529	11,697,083	15.0665	6.10017	0.0044053	227
228	51,984	11,852,352	15.0997	6.10911	0.0043860	228
229	52,441	12,008,989	15.1327	6.11803	0.0043668	229
230	52,900	12,167,000	15.1658	6.12693	0.0043478	230
231	53,361	12,326,391	15.1987	6.13579	0.0043290	231
232	53,824	12,487,168	15.2315	6.14463	0.0043103	232
233	54,289	12,649,337	15.2643	6.15345	0.0042918	233
234	54,756	12,812,904	15.2971	6.16224	0.0042735	234
235	55,225	12,977,875	15.3297	6.17101	0.0042553	235
236	55,696	13,144,256	15.3623	6.17975	0.0042373	236
237	56,169	13,312,053	15.3948	6.18846	0.0042194	237
238	56,644	13,481,272	15.4272	6.19715	0.0042017	238
239	57,121	13,651,919	15.4596	6.20582	0.0041841	239
240	57,600	13,824,000	15.4919	6.21447	0.0041667	240
241	58,081	13,997,521	15.5242	6.22308	0.0041494	241
242	58,564	14,172,488	15.5563	6.23168	0.0041322	242
243	59,049	14,348,907	15.5885	6.24025	0.0041152	243
244	59,536	14,526,784	15.6205	6.24880	0.0040984	244
245	60,025	14,706,125	15.6525	6.25732	0.0040816	245
246	60,516	14,886,936	15.6844	6.26583	0.0040650	246
247	61,009	15,069,223	15.7162	6.27431	0.0040486	247
248	61,504	15,252,992	15.7480	6.28276	0.0040323	248
249	62,001	15,438,249	15.7797	6.29119	0.0040161	249
250	62,500	15,625,000	15.8114	6.29961	0.0040000	250

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
251	63,001	15,813,251	15.8430	6.30799	0.0039841	251
252	63,504	16,003,008	15.8745	6.31636	0.0039683	252
253	64,009	16,194,277	15.9060	6.32470	0.0039526	253
254	64,516	16,387,064	15.9374	6.33303	0.0039370	254
255	65,025	16,581,375	15.9687	6.34133	0.0039216	255
256	65,536	16,777,216	16.0000	6.34960	0.0039063	256
257	66,049	16,974,593	16.0312	6.35786	0.0038911	257
258	66,564	17,173,512	16.0624	6.36610	0.0038760	258
259	67,081	17,373,979	16.0935	6.37431	0.0038610	259
260	67,600	17,576,000	16.1245	6.38250	0.0038462	260
261	68,121	17,779,581	16.1555	6.39068	0.0038314	261
262	68,644	17,984,728	16.1864	6.39883	0.0038168	262
263	69,169	18,191,447	16.2173	6.40696	0.0038023	263
264	69,696	18,399,744	16.2481	6.41507	0.0037879	264
265	70,225	18,609,625	16.2788	6.42316	0.0037736	265
266	70,756	18,821,096	16.3095	6.43123	0.0037594	266
267	71,289	19,034,163	16.3401	6.43928	0.0037453	267
268	71,824	19,248,832	16.3707	6.44731	0.0037313	268
269	72,361	19,465,109	16.4012	6.45531	0.0037175	269
270	72,900	19,683,000	16.4317	6.46330	0.0037037	270
271	73,441	19,902,511	16.4621	6.47127	0.0036900	271
272	73,984	20,123,648	16.4924	6.47922	0.0036765	272
273	74,529	20,346,417	16.5227	6.48715	0.0036630	273
274	75,076	20,570,824	16.5529	6.49507	0.0036496	274
275	75,625	20,796,875	16.5831	6.50296	0.0036364	275
276	76,176	21,024,576	16.6132	6.51083	0.0036232	276
277	76,729	21,253,933	16.6433	6.51868	0.0036101	277
278	77,284	21,484,952	16.6733	6.52652	0.0035971	278
279	77,841	21,717,639	16.7033	6.53434	0.0035842	279
280	78,400	21,952,000	16.7332	6.54213	0.0035714	280
281	78,961	22,188,041	16.7631	6.54991	0.0035587	281
282	79,524	22,425,768	16.7929	6.55767	0.0035461	282
283	80,089	22,665,187	16.8226	6.56541	0.0035336	283
284	80,656	22,906,304	16.8523	6.57314	0.0035211	284
285	81,225	23,149,125	16.8819	6.58084	0.0035088	285
286	81,796	23,393,656	16.9115	6.58853	0.0034965	286
287	82,369	23,639,903	16.9411	6.59620	0.0034843	287
288	82,944	23,887,872	16.9706	6.60385	0.0034722	288
289	83,521	24,137,569	17.0000	6.61149	0.0034602	289
290	84,100	24,389,000	17.0294	6.61911	0.0034483	290
291	84,681	24,642,171	17.0587	6.62671	0.0034364	291
292	85,264	24,897,088	17.0880	6.63429	0.0034247	292
293	85,849	25,153,757	17.1172	6.64185	0.0034130	293
294	86,436	25,412,184	17.1464	6.64940	0.0034014	294
295	87,025	25,672,375	17.1756	6.65693	0.0033898	295
296	87,616	25,934,336	17.2047	6.66444	0.0033784	296
297	88,209	26,198,073	17.2337	6.67194	0.0033670	297
298	88,804	26,463,592	17.2627	6.67942	0.0033557	298
299	89,401	26,730,899	17.2916	6.68688	0.0033445	299
300	90,000	27,000,000	17.3205	6.69433	0.0033333	300



## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
301	90,601	27,270,901	17.3494	6.70176	0.0033223	301
302	91,204	27,543,608	17.3781	6.70917	0.0033113	302
303	91,809	27,818,127	17.4069	6.71657	0.0033003	303
304	92,416	28,094,464	17.4356	6.72395	0.0032895	304
305	93,025	28,372,625	17.4642	6.73132	0.0032787	305
306	93,636	28,652,616	17.4929	6.73866	0.0032680	306
307	94,249	28,934,443	17.5214	6.74600	0.0032573	307
308	94,864	29,218,112	17.5499	6.75331	0.0032468	308
309	95,481	29,503,629	17.5784	6.76061	0.0032362	309
310	96,100	29,791,000	17.6068	6.76790	0.0032258	310
311	96,721	30,080,231	17.6352	6.77517	0.0032154	311
312	97,344	30,371,328	17.6635	6.78242	0.0032051	312
313	97,969	30,664,297	17.6918	6.78966	0.0031949	313
314	98,596	30,959,144	17.7200	6.79688	0.0031847	314
315	99,225	31,255,875	17.7482	6.80409	0.0031746	315
316	99,856	31,554,496	17.7764	6.81128	0.0031646	316
317	100,489	31,855,013	17.8045	6.81846	0.0031546	317
318	101,124	32,157,432	17.8326	6.82562	0.0031447	318
319	101,761	32,461,759	17.8606	6.83277	0.0031348	319
320	102,400	32,768,000	17.8885	6.83990	0.0031250	320
321	103,041	33,076,161	17.9165	6.84702	0.0031153	321
322	103,684	33,386,248	17.9444	6.85412	0.0031056	322
323	104,329	33,698,267	17.9722	6.86121	0.0030960	323
324	104,976	34,012,224	18.0000	6.86829	0.0030864	324
325	105,625	34,328,125	18.0278	6.87534	0.0030769	325
326	106,276	34,645,976	18.0555	6.88239	0.0030675	326
327	106,929	34,965,783	18.0831	6.88942	0.0030581	327
328	107,584	35,287,552	18.1108	6.89643	0.0030488	328
329	108,241	35,611,289	18.1384	6.90344	0.0030395	329
330	108,900	35,937,000	18.1659	6.91042	0.0030303	330
331	109,561	36,264,691	18.1934	6.91740	0.0030211	331
332	110,224	36,594,368	18.2209	6.92436	0.0030120	332
333	110,889	36,926,037	18.2483	6.93131	0.0030030	333
334	111,556	37,259,704	18.2757	6.93823	0.0029940	334
335	112,225	37,595,375	18.3030	6.94515	0.0029851	335
336	112,896	37,933,056	18.3303	6.95205	0.0029762	336
337	113,569	38,272,753	18.3576	6.95894	0.0029674	337
338	114,244	38,614,472	18.3848	6.96582	0.0029586	338
339	114,921	38,958,219	18.4120	6.97268	0.0029499	339
340	115,600	39,304,000	18.4391	6.97953	0.0029412	340
341	116,281	39,651,821	18.4662	6.98637	0.0029326	341
342	116,964	40,001,688	18.4932	6.99319	0.0029240	342
343	117,649	40,353,607	18.5203	7.00000	0.0029155	343
344	118,336	40,707,584	18.5472	7.00680	0.0029070	344
345	119,025	41,063,625	18.5742	7.01358	0.0028986	345
346	119,716	41,421,736	18.6011	7.02035	0.0028902	346
347	120,409	41,781,923	18.6279	7.02711	0.0028818	347
348	121,104	42,144,192	18.6548	7.03385	0.0028736	348
349	121,801	42,508,549	18.6815	7.04059	0.0028653	349
350	122,500	42,875,000	18.7083	7.04730	0.0028571	350

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
351	123,201	43,243,551	18.7350	7.05400	0.0028490	351
352	123,904	43,614,208	18.7617	7.06070	0.0028409	352
353	124,609	43,986,977	18.7883	7.06738	0.0028329	353
354	125,316	44,361,864	18.8149	7.07404	0.0028249	354
355	126,025	44,738,875	18.8414	7.08070	0.0028169	355
356	126,736	45,118,016	18.8680	7.08734	0.0028090	356
357	127,449	45,499,293	18.8944	7.09397	0.0028011	357
358	128,164	45,882,712	18.9209	7.10059	0.0027933	358
359	128,881	46,268,279	18.9473	7.10719	0.0027855	359
360	129,600	46,656,000	18.9737	7.11379	0.0027778	360
361	130,321	47,045,881	19.0000	7.12037	0.0027701	361
362	131,044	47,437,928	19.0263	7.12694	0.0027624	362
363	131,769	47,832,147	19.0526	7.13349	0.0027548	363
364	132,496	48,228,544	19.0788	7.14004	0.0027473	364
365	133,225	48,627,125	19.1050	7.14657	0.0027397	365
366	133,956	49,027,896	19.1311	7.15309	0.0027322	366
367	134,689	49,430,863	19.1572	7.15960	0.0027248	367
368	135,424	49,836,032	19.1833	7.16610	0.0027174	368
369	136,161	50,243,409	19.2094	7.17258	0.0027100	369
370	136,900	50,653,000	19.2354	7.17905	0.0027027	370
371	137,641	51,064,811	19.2614	7.18552	0.0026954	371
372	138,384	51,478,848	19.2873	7.19197	0.0026882	372
373	139,129	51,895,117	19.3132	7.19841	0.0026810	373
374	139,876	52,313,624	19.3391	7.20483	0.0026738	374
375	140,625	52,734,375	19.3649	7.21125	0.0026667	375
376	141,376	53,157,376	19.3907	7.21765	0.0026596	376
377	142,129	53,582,633	19.4165	7.22405	0.0026525	377
378	142,884	54,010,152	19.4422	7.23043	0.0026455	378
379	143,641	54,439,939	19.4679	7.23680	0.0026385	379
380	144,400	54,872,000	19.4936	7.24316	0.0026316	380
381	145,161	55,306,341	19.5192	7.24950	0.0026247	381
382	145,924	55,742,968	19.5448	7.25584	0.0026178	382
383	146,689	56,181,887	19.5704	7.26217	0.0026110	383
384	147,456	56,623,104	19.5959	7.26848	0.0026042	384
385	148,225	57,066,625	19.6214	7.27479	0.0025974	385
386	148,996	57,512,456	19.6469	7.28108	0.0025907	386
387	149,769	57,960,603	19.6723	7.28736	0.0025840	387
388	150,544	58,411,072	19.6977	7.29363	0.0025773	388
389	151,321	58,863,869	19.7231	7.29989	0.0025707	389
390	152,100	59,319,000	19.7484	7.30614	0.0025641	390
391	152,881	59,776,471	19.7737	7.31238	0.0025575	391
392	153,664	60,236,288	19.7990	7.31861	0.0025510	392
393	154,449	60,698,457	19.8242	7.32483	0.0025445	393
394	155,236	61,162,984	19.8494	7.33104	0.0025381	394
395	156,025	61,629,875	19.8746	7.33723	0.0025316	395
396	156,816	62,099,136	19.8997	7.34342	0.0025253	396
397	157,609	62,570,773	19.9249	7.34960	0.0025189	397
398	158,404	63,044,792	19.9499	7.35576	0.0025126	398
399	159,201	63,521,199	19.9750	7.36192	0.0025063	399
400	160,000	64,000,000	20.0000	7.36806	0.0025000	400

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
401	160,801	54,481,201	20.0250	7.37429	0.0024938	401
402	161,604	64,964,808	20.0499	7.38032	0.0024876	402
403	162,409	65,450,827	20.0749	7.38644	0.0024814	403
404	163,216	65,939,264	20.0998	7.39254	0.0024752	404
405	164,025	66,430,125	20.1246	7.39864	0.0024691	405
406	164,836	66,923,416	20.1494	7.40472	0.0024631	406
407	165,649	67,419,143	20.1742	7.41080	0.0024570	407
408	166,464	67,917,312	20.1990	7.41686	0.0024510	408
409	167,281	68,417,929	20.2237	7.42291	0.0024450	409
410	168,100	68,921,000	20.2485	7.42896	0.0024390	410
411	168,921	69,426,531	20.2731	7.43499	0.0024331	411
412	169,744	69,934,528	20.2978	7.44102	0.0024272	412
413	170,569	70,444,997	20.3224	7.44703	0.0024213	413
414	171,396	70,957,944	20.3470	7.45304	0.0024155	414
415	172,225	71,473,375	20.3715	7.45904	0.0024096	415
416	173,056	71,991,296	20.3961	7.46502	0.0024038	416
417	173,889	72,511,713	20.4206	7.47100	0.0023981	417
418	174,724	73,034,632	20.4450	7.47697	0.0023923	418
419	175,561	73,560,059	20.4695	7.48292	0.0023866	419
420	176,400	74,088,000	20.4939	7.48887	0.0023810	420
421	177,241	74,618,461	20.5183	7.49481	0.0023753	421
422	178,084	75,151,448	20.5426	7.50074	0.0023697	422
423	178,929	75,686,967	20.5670	7.50666	0.0023641	423
424	179,776	76,225,024	20.5913	7.51257	0.0023585	424
425	180,625	76,765,625	20.6155	7.51847	0.0023529	425
426	181,476	77,308,776	20.6398	7.52437	0.0023474	426
427	182,329	77,854,483	20.6640	7.53025	0.0023419	427
428	183,184	78,402,752	20.6882	7.53612	0.0023364	428
429	184,041	78,953,589	20.7123	7.54199	0.0023310	429
430	184,900	79,507,000	20.7364	7.54784	0.0023256	430
431	185,761	80,062,991	20.7605	7.55369	0.0023202	431
432	186,624	80,621,568	20.7846	7.55953	0.0023148	432
433	187,489	81,182,737	20.8087	7.56535	0.0023095	433
434	188,356	81,746,504	20.8327	7.57117	0.0023041	434
435	189,225	82,312,875	20.8567	7.57698	0.0022989	435
436	190,096	82,881,856	20.8806	7.58279	0.0022936	436
437	190,969	83,453,453	20.9045	7.58858	0.0022883	437
438	191,844	84,027,672	20.9284	7.59436	0.0022831	438
439	192,721	84,604,519	20.9523	7.60014	0.0022779	439
440	193,600	85,184,000	20.9762	7.60590	0.0022727	440
441	194,481	85,766,121	21.0000	7.61166	0.0022676	441
442	195,364	86,350,888	21.0238	7.61741	0.0022624	442
443	196,249	86,938,307	21.0476	7.62315	0.0022573	443
444	197,136	87,528,384	21.0713	7.62888	0.0022523	444
445	198,025	88,121,125	21.0950	7.63461	0.0022472	445
446	198,916	88,716,536	21.1187	7.64032	0.0022422	446
447	199,809	89,314,623	21.1424	7.64603	0.0022371	447
448	200,704	89,915,392	21.1660	7.65172	0.0022321	448
449	201,601	90,518,849	21.1896	7.65741	0.0022272	449
450	202,500	91,125,000	21.2132	7.66309	0.0022222	450



Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
451	203,401	91,733,851	21.2368	7.66877	0.0022173	451
452	204,304	92,345,408	21.2603	7.67443	0.0022124	452
453	205,209	92,959,677	21.2838	7.68009	0.0022075	453
454	206,116	93,576,664	21.3073	7.68573	0.0022026	454
455	207,025	94,196,375	21.3307	7.69137	0.0021978	455
456	207,936	94,818,816	21.3542	7.69700	0.0021930	456
457	208,849	95,443,993	21.3776	7.70262	0.0021882	457
458	209,764	96,071,912	21.4009	7.70824	0.0021834	458
459	210,681	96,702,579	21.4243	7.71384	0.0021786	459
460	211,600	97,336,000	21.4476	7.71944	0.0021739	460
461	212,521	97,972,181	21.4709	7.72503	0.0021692	461
462	213,444	98,611,128	21.4942	7.73061	0.0021645	462
463	214,369	99,252,847	21.5174	7.73619	0.0021598	463
464	215,296	99,897,344	21.5407	7.74175	0.0021552	464
465	216,225	100,544,625	21.5639	7.74731	0.0021505	465
466	217,156	101,194,696	21.5870	7.75286	0.0021459	466
467	218,089	101,847,563	21.6102	7.75840	0.0021413	467
468	219,024	102,503,232	21.6333	7.76394	0.0021368	468
469	219,961	103,161,709	21.6564	7.76946	0.0021322	469
470	220,900	103,823,000	21.6795	7.77498	0.0021277	470
471	221,841	104,487,111	21.7025	7.78049	0.0021231	471
472	222,784	105,154,048	21.7256	7.78599	0.0021186	472
473	223,729	105,823,817	21.7486	7.79149	0.0021142	473
474	224,676	106,496,424	21.7715	7.79697	0.0021097	474
475	225,625	107,171,875	21.7945	7.80245	0.0021053	475
476	226,576	107,850,176	21.8174	7.80793	0.0021008	476
477	227,529	108,531,333	21.8403	7.81339	0.0020964	477
478	228,484	109,215,352	21.8632	7.81885	0.0020921	478
479	229,441	109,902,239	21.8861	7.82429	0.0020877	479
480	230,400	110,592,000	21.9089	7.82974	0.0020833	480
481	231,361	111,284,641	21.9317	7.83517	0.0020790	481
482	232,324	111,980,168	21.9545	7.84059	0.0020747	482
483	233,289	112,678,587	21.9773	7.84601	0.0020704	483
484	234,256	113,379,904	22.0000	7.85142	0.0020661	484
485	235,225	114,084,125	22.0227	7.85683	0.0020619	485
486	236,196	114,791,256	22.0454	7.86222	0.0020576	486
487	237,169	115,501,303	22.0681	7.86761	0.0020534	487
488	238,144	116,214,272	22.0907	7.87299	0.0020492	488
489	239,121	116,930,169	22.1133	7.87837	0.0020450	489
490	240,100	117,649,000	22.1359	7.88374	0.0020408	490
491	241,081	118,370,771	22.1585	7.88909	0.0020367	491
492	242,064	119,095,488	22.1811	7.89445	0.0020325	492
493	243,049	119,823,157	22.2036	7.89979	0.0020284	493
494	244,036	120,553,784	22.2261	7.90513	0.0020243	494
495	245,025	121,287,375	22.2486	7.91046	0.0020202	495
496	246,016	122,023,936	22.2711	7.91578	0.0020161	496
497	247,009	122,763,473	22.2935	7.92110	0.0020121	497
498	248,004	123,505,992	22.3159	7.92641	0.0020080	498
499	249,001	124,251,499	22.3383	7.93171	0.0020040	499
500	250,000	125,000,000	22.3607	7.93701	0.0020000	500

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
501	251,001	125,751,501	22.3830	7.94229	0.0019960	501
502	252,004	126,506,008	22.4054	7.94757	0.0019920	502
503	253,009	127,263,527	22.4277	7.95285	0.0019881	503
504	254,016	128,024,064	22.4499	7.95811	0.0019841	504
505	255,025	128,787,625	22.4722	7.96337	0.0019802	505
506	256,036	129,554,216	22.4944	7.96863	0.0019763	506
507	257,049	130,323,843	22.5167	7.97387	0.0019724	507
508	258,064	131,096,512	22.5389	7.97911	0.0019685	508
509	259,081	131,872,229	22.5610	7.98434	0.0019646	509
510	260,100	132,651,000	22.5832	7.98957	0.0019608	510
511	261,121	133,432,831	22.6053	7.99479	0.0019569	511
512	262,144	134,217,728	22.6274	8.00000	0.0019531	512
513	263,169	135,005,697	22.6495	8.00520	0.0019493	513
514	264,196	135,796,744	22.6716	8.01040	0.0019455	514
515	265,225	136,590,875	22.6936	8.01559	0.0019417	515
516	266,256	137,388,096	22.7156	8.02078	0.0019380	516
517	267,289	138,188,413	22.7376	8.02596	0.0019342	517
518	268,324	138,991,832	22.7596	8.03113	0.0019305	518
519	269,361	139,798,359	22.7816	8.03629	0.0019268	519
520	270,400	140,608,000	22.8035	8.04145	0.0019231	520
521	271,441	141,420,761	22.8254	8.04660	0.0019194	521
522	272,484	142,236,648	22.8473	8.05175	0.0019157	522
523	273,529	143,055,667	22.8692	8.05689	0.0019120	523
524	274,576	143,877,824	22.8910	8.06202	0.0019084	524
525	275,625	144,703,125	22.9129	8.06714	0.0019048	525
526	276,676	145,531,576	22.9347	8.07226	0.0019011	526
527	277,729	146,363,183	22.9565	8.07737	0.0018975	527
528	278,784	147,197,952	22.9783	8.08248	0.0018939	528
529	279,841	148,035,889	23.0000	8.08758	0.0018904	529
530	280,900	148,877,000	23.0217	8.09267	0.0018868	530
531	281,961	149,721,291	23.0434	8.09776	0.0018832	531
532	283,024	150,568,768	23.0651	8.10284	0.0018797	532
533	284,089	151,419,437	23.0868	8.10791	0.0018762	533
534	285,156	152,273,304	23.1084	8.11298	0.0018727	534
535	286,225	153,130,375	23.1301	8.11804	0.0018692	535
536	287,296	153,990,656	23.1517	8.12310	0.0018657	536
537	288,369	154,854,153	23.1733	8.12814	0.0018622	537
538	289,444	155,720,872	23.1948	8.13319	0.0018587	538
539	290,521	156,590,819	23.2164	8.13822	0.0018553	539
540	291,600	157,464,000	23.2379	8.14325	0.0018519	540
541	292,681	158,340,421	23.2594	8.14828	0.0018484	541
542	293,764	159,220,088	23.2809	8.15329	0.0018450	542
543	294,849	160,103,007	23.3024	8.15831	0.0018416	543
544	295,936	160,989,184	23.3238	8.16331	0.0018382	544
545	297,025	161,878,625	23.3452	8.16831	0.0018349	545
546	298,116	162,771,336	23.3666	8.17330	0.0018315	546
547	299,209	163,667,323	23.3880	8.17829	0.0018282	547
548	300,304	164,566,592	23.4094	8.18327	0.0018248	548
549	301,401	165,469,149	23.4307	8.18824	0.0018215	549
550	302,500	166,375,000	23.4521	8.19321	0.0018182	550

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
551	303,601	167,284,151	23.4734	8.19818	0.0018149	551
552	304,704	168,196,608	23.4947	8.20313	0.0018116	552
553	305,809	169,112,377	23.5160	8.20808	0.0018083	553
554	306,916	170,031,464	23.5372	8.21303	0.0018051	554
555	308,025	170,953,875	23.5584	8.21797	0.0018018	555
556	309,136	171,879,616	23.5797	8.22290	0.0017986	556
557	310,249	172,808,693	23.6008	8.22783	0.0017953	557
558	311,364	173,741,112	23.6220	8.23275	0.0017921	558
559	312,481	174,676,879	23.6432	8.23766	0.0017889	559
560	313,600	175,616,000	23.6643	8.24257	0.0017857	560
561	314,721	176,558,481	23.6854	8.24747	0.0017825	561
562	315,844	177,504,328	23.7065	8.25237	0.0017794	562
563	316,969	178,453,547	23.7276	8.25726	0.0017762	563
564	318,096	179,406,144	23.7487	8.26215	0.0017731	564
565	319,225	180,362,125	23.7697	8.26703	0.0017699	565
566	320,356	181,321,496	23.7908	8.27190	0.0017668	566
567	321,489	182,284,263	23.8118	8.27677	0.0017637	567
568	322,624	183,250,432	23.8328	8.28163	0.0017606	568
569	323,761	184,220,009	23.8537	8.28649	0.0017575	569
570	324,900	185,193,000	23.8747	8.29134	0.0017544	570
571	326,041	186,169,411	23.8956	8.29619	0.0017513	571
572	327,184	187,149,248	23.9165	8.30103	0.0017483	572
573	328,329	188,132,517	23.9374	8.30587	0.0017452	573
574	329,476	189,119,224	23.9583	8.31069	0.0017422	574
575	330,625	190,109,375	23.9792	8.31552	0.0017391	575
576	331,776	191,102,976	24.0000	8.32034	0.0017361	576
577	332,929	192,100,033	24.0208	8.32515	0.0017331	577
578	334,084	193,100,552	24.0416	8.32995	0.0017301	578
579	335,241	194,104,539	24.0624	8.33476	0.0017271	579
580	336,400	195,112,000	24.0832	8.33955	0.0017241	580
581	337,561	196,122,941	24.1039	8.34434	0.0017212	581
582	338,724	197,137,368	24.1247	8.34913	0.0017182	582
583	339,889	198,155,287	24.1454	8.35390	0.0017153	583
584	341,056	199,176,704	24.1661	8.35868	0.0017123	584
585	342,225	200,201,625	24.1868	8.36345	0.0017094	585
586	343,396	201,230,056	24.2074	8.36821	0.0017065	586
587	344,569	202,262,003	24.2281	8.37297	0.0017036	587
588	345,744	203,297,472	24.2487	8.37772	0.0017007	588
589	346,921	204,336,469	24.2693	8.38247	0.0016978	589
590	348,100	205,379,000	24.2899	8.38721	0.0016949	590
591	349,281	206,425,071	24.3105	8.39194	0.0016920	591
592	350,464	207,474,688	24.3311	8.39667	0.0016892	592
593	351,649	208,527,857	24.3516	8.40140	0.0016863	593
594	352,836	209,584,584	24.3721	8.40612	0.0016835	594
595	354,025	210,644,875	24.3926	8.41083	0.0016807	595
596	355,216	211,708,736	24.4131	8.41554	0.0016779	596
597	356,409	212,776,173	24.4336	8.42025	0.0016750	597
598	357,604	213,847,192	24.4540	8.42494	0.0016722	598
599	358,801	214,921,799	24.4745	8.42964	0.0016694	599
600	360,000	216,000,000	24.4949	8.43433	0.0016667	600

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
601	361,201	217,081,801	24.5153	8.43901	0.0016639	601
602	362,404	218,167,208	24.5357	8.44369	0.0016611	602
603	363,609	219,256,227	24.5561	8.44836	0.0016584	603
604	364,816	220,348,864	24.5764	8.45303	0.0016556	604
605	366,025	221,445,125	24.5967	8.45769	0.0016529	605
606	367,236	222,545,016	24.6171	8.46235	0.0016502	606
607	368,449	223,648,543	24.6374	8.46700	0.0016474	607
608	369,664	224,755,712	24.6577	8.47165	0.0016447	608
609	370,881	225,866,529	24.6779	8.47629	0.0016420	609
610	372,100	226,981,000	24.6982	8.48093	0.0016393	610
611	373,321	228,099,131	24.7184	8.48556	0.0016367	611
612	374,544	229,220,928	24.7386	8.49018	0.0016340	612
613	375,769	230,346,397	24.7588	8.49481	0.0016313	613
614	376,996	231,475,544	24.7790	8.49942	0.0016287	614
615	378,225	232,608,375	24.7992	8.50404	0.0016260	615
616	379,456	233,744,896	24.8193	8.50864	0.0016234	616
617	380,689	234,885,113	24.8395	8.51324	0.0016207	617
618	381,924	236,029,032	24.8596	8.51784	0.0016181	618
619	383,161	237,176,659	24.8797	8.52243	0.0016155	619
620	384,400	238,328,000	24.8998	8.52702	0.0016129	620
621	385,641	239,483,061	24.9199	8.53160	0.0016103	621
622	386,884	240,641,848	24.9399	8.53618	0.0016077	622
623	388,129	241,804,367	24.9600	8.54075	0.0016051	623
624	389,376	242,970,624	24.9800	8.54532	0.0016026	624
625	390,625	244,140,625	25.0000	8.54988	0.0016000	625
626	391,876	245,314,376	25.0200	8.55444	0.0015974	626
627	393,129	246,491,883	25.0400	8.55899	0.0015949	627
628	394,384	247,673,152	25.0599	8.56354	0.0015924	628
629	395,641	248,858,189	25.0799	8.56808	0.0015898	629
630	396,900	250,047,000	25.0998	8.57262	0.0015873	630
631	398,161	251,239,591	25.1197	8.57715	0.0015848	631
632	399,424	252,435,968	25.1396	8.58168	0.0015823	632
633	400,689	253,636,137	25.1595	8.58620	0.0015798	633
634	401,956	254,840,104	25.1794	8.59072	0.0015773	634
635	403,225	256,047,875	25.1992	8.59524	0.0015748	635
636	404,496	257,259,456	25.2190	8.59975	0.0015723	636
637	405,769	258,474,853	25.2389	8.60425	0.0015699	637
638	407,044	259,694,072	25.2587	8.60875	0.0015674	638
639	408,321	260,917,119	25.2784	8.61325	0.0015649	639
640	409,600	262,144,000	25.2982	8.61774	0.0015625	640
641	410,881	263,374,721	25.3180	8.62222	0.0015601	641
642	412,164	264,609,288	25.3377	8.62671	0.0015576	642
643	413,449	265,847,707	25.3574	8.63118	0.0015552	643
644	414,736	267,089,984	25.3772	8.63566	0.0015528	644
645	416,025	268,336,125	25.3969	8.64012	0.0015504	645
646	417,316	269,586,136	25.4165	8.64459	0.0015480	646
647	418,609	270,840,023	25.4362	8.64904	0.0015456	647
648	419,904	272,097,792	25.4558	8.65350	0.0015432	648
649	421,201	273,359,449	25.4755	8.65795	0.0015408	649
650	422,500	274,625,000	25.4951	8.66239	0.0015385	650

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
651	423,801	275,894,451	25.5147	8.66683	0.0015361	651
652	425,104	277,167,808	25.5343	8.67127	0.0015337	652
653	426,409	278,445,077	25.5539	8.67570	0.0015314	653
654	427,716	279,726,264	25.5734	8.68012	0.0015291	654
655	429,025	281,011,375	25.5930	8.68455	0.0015267	655
656	430,336	282,300,416	25.6125	8.68896	0.0015244	656
657	431,649	283,593,393	25.6320	8.69338	0.0015221	657
658	432,964	284,890,312	25.6515	8.69778	0.0015198	658
659	434,281	286,191,179	25.6710	8.70219	0.0015175	659
660	435,600	287,496,000	25.6905	8.70659	0.0015152	660
661	436,921	288,804,781	25.7099	8.71098	0.0015129	661
662	438,244	290,117,528	25.7294	8.71537	0.0015106	662
663	439,569	291,434,247	25.7488	8.71976	0.0015083	663
664	440,896	292,754,944	25.7682	8.72414	0.0015060	664
665	442,225	294,079,625	25.7876	8.72852	0.0015038	665
666	443,556	295,408,296	25.8070	8.73289	0.0015015	666
667	444,889	296,740,963	25.8263	8.73726	0.0014993	667
668	446,224	298,077,632	25.8457	8.74162	0.0014970	668
669	447,561	299,418,309	25.8650	8.74598	0.0014948	669
670	448,900	300,763,000	25.8844	8.75034	0.0014925	670
671	450,241	302,111,711	25.9037	8.75469	0.0014903	671
672	451,584	303,464,448	25.9230	8.75904	0.0014881	672
673	452,929	304,821,217	25.9422	8.76338	0.0014859	673
674	454,276	306,182,024	25.9615	8.76772	0.0014837	674
675	455,625	307,546,875	25.9808	8.77205	0.0014815	675
676	456,976	308,915,776	26.0000	8.77638	0.0014793	676
677	458,329	310,288,733	26.0192	8.78071	0.0014771	677
678	459,684	311,665,752	26.0384	8.78503	0.0014749	678
679	461,041	313,046,839	26.0576	8.78935	0.0014728	679
680	462,400	314,432,000	26.0768	8.79366	0.0014706	680
681	463,761	315,821,241	26.0960	8.79797	0.0014684	681
682	465,124	317,214,568	26.1151	8.80227	0.0014663	682
683	466,489	318,611,987	26.1343	8.80657	0.0014641	683
684	467,856	320,013,504	26.1534	8.81087	0.0014620	684
685	469,225	321,419,125	26.1725	8.81516	0.0014599	685
686	470,596	322,828,856	26.1916	8.81945	0.0014577	686
687	471,969	324,242,703	26.2107	8.82373	0.0014556	687
688	473,344	325,660,672	26.2298	8.82801	0.0014535	688
689	474,721	327,082,769	26.2488	8.83229	0.0014514	689
690	476,100	328,509,000	26.2679	8.83656	0.0014493	690
691	477,481	329,939,371	26.2869	8.84082	0.0014472	691
692	478,864	331,373,888	26.3059	8.84509	0.0014451	692
693	480,249	332,812,557	26.3249	8.84934	0.0014430	693
694	481,636	334,255,384	26.3439	8.85360	0.0014409	694
695	483,025	335,702,375	26.3629	8.85785	0.0014388	695
696	484,416	337,153,536	26.3818	8.86210	0.0014368	696
697	485,809	338,608,873	26.4008	8.86634	0.0014347	697
698	487,204	340,068,392	26.4197	8.87058	0.0014327	698
699	488,601	341,532,099	26.4386	8.87481	0.0014306	699
700	490,000	343,000,000	26.4575	8.87904	0.0014286	700



## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
701	491,401	344,472,101	26.4764	8.88327	0.0014265	701
702	492,804	345,948,408	26.4953	8.88749	0.0014245	702
703	494,209	347,428,927	26.5141	8.89171	0.0014225	703
704	495,616	348,913,664	26.5330	8.89592	0.0014205	704
705	497,025	350,402,625	26.5518	8.90013	0.0014184	705
706	498,436	351,895,816	26.5707	8.90434	0.0014164	706
707	499,849	353,393,243	26.5895	8.90854	0.0014144	707
708	501,264	354,894,912	26.6083	8.91274	0.0014124	708
709	502,681	356,400,829	26.6271	8.91693	0.0014104	709
710	504,100	357,911,000	26.6458	8.92112	0.0014085	710
711	505,521	359,425,431	26.6646	8.92531	0.0014065	711
712	506,944	360,944,128	26.6833	8.92949	0.0014045	712
713	508,369	362,467,097	26.7021	8.93367	0.0014025	713
714	509,796	363,994,344	26.7208	8.93784	0.0014006	714
715	511,225	365,525,875	26.7395	8.94201	0.0013986	715
716	512,656	367,061,696	26.7582	8.94618	0.0013966	716
717	514,089	368,601,813	26.7769	8.95034	0.0013947	717
718	515,524	370,146,232	26.7955	8.95450	0.0013928	718
719	516,961	371,694,959	26.8142	8.95866	0.0013908	719
720	518,400	373,248,000	26.8328	8.96281	0.0013889	720
721	519,841	374,805,361	26.8514	8.96696	0.0013870	721
722	521,284	376,367,048	26.8701	8.97110	0.0013850	722
723	522,729	377,933,067	26.8887	8.97524	0.0013831	723
724	524,176	379,503,424	26.9072	8.97938	0.0013812	724
725	525,625	381,078,125	26.9258	8.98351	0.0013793	725
726	527,076	382,657,176	26.9444	8.98764	0.0013774	726
727	528,529	384,240,583	26.9629	8.99176	0.0013755	727
728	529,984	385,828,352	26.9815	8.99589	0.0013736	728
729	531,441	387,420,489	27.0000	9.00000	0.0013717	729
730	532,900	389,017,000	27.0185	9.00411	0.0013699	730
731	534,361	390,617,891	27.0370	9.00822	0.0013680	731
732	535,824	392,223,168	27.0555	9.01233	0.0013661	732
733	537,289	393,832,837	27.0740	9.01643	0.0013643	733
734	538,756	395,446,904	27.0924	9.02053	0.0013624	734
735	540,225	397,065,375	27.1109	9.02462	0.0013605	735
736	541,696	398,688,256	27.1293	9.02871	0.0013587	736
737	543,169	400,315,553	27.1477	9.03280	0.0013569	737
738	544,644	401,947,272	27.1662	9.03689	0.0013550	738
739	546,121	403,583,419	27.1846	9.04097	0.0013532	739
740	547,600	405,224,000	27.2029	9.04504	0.0013514	740
741	549,081	406,869,021	27.2213	9.04911	0.0013495	741
742	550,564	408,518,488	27.2397	9.05318	0.0013477	742
743	552,049	410,172,407	27.2580	9.05725	0.0013459	743
744	553,536	411,830,784	27.2764	9.06131	0.0013441	744
745	555,025	413,493,625	27.2947	9.06537	0.0013423	745
746	556,516	415,160,936	27.3130	9.06942	0.0013405	746
747	558,009	416,832,723	27.3313	9.07347	0.0013387	747
748	559,504	418,508,992	27.3496	9.07752	0.0013369	748
749	561,001	420,189,749	27.3679	9.08156	0.0013351	749
750	562,500	421,875,000	27.3861	9.08560	0.0013333	750

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
751	564,001	423,564,751	27.4044	9.08964	0.0013316	751
752	565,504	425,259,008	27.4226	9.09367	0.0013298	752
753	567,009	426,957,777	27.4408	9.09770	0.0013280	753
754	568,516	428,661,064	27.4591	9.10173	0.0013263	754
755	570,025	430,368,875	27.4773	9.10575	0.0013245	755
756	571,536	432,081,216	27.4955	9.10977	0.0013228	756
757	573,049	433,798,093	27.5136	9.11378	0.0013210	757
758	574,564	435,519,512	27.5318	9.11779	0.0013193	758
759	576,081	437,245,479	27.5500	9.12180	0.0013175	759
760	577,600	438,976,000	27.5681	9.12581	0.0013158	760
761	579,121	440,711,081	27.5862	9.12981	0.0013141	761
762	580,644	442,450,728	27.6043	9.13380	0.0013123	762
763	582,169	444,194,947	27.6225	9.13780	0.0013106	763
764	583,696	445,943,744	27.6405	9.14179	0.0013089	764
765	585,225	447,697,125	27.6586	9.14577	0.0013072	765
766	586,756	449,455,096	27.6767	9.14976	0.0013055	766
767	588,289	451,217,663	27.6948	9.15374	0.0013038	767
768	589,824	452,984,832	27.7128	9.15771	0.0013021	768
769	591,361	454,756,609	27.7308	9.16169	0.0013004	769
770	592,900	456,533,000	27.7489	9.16566	0.0012987	770
771	594,441	458,314,011	27.7669	9.16962	0.0012970	771
772	595,984	460,099,648	27.7849	9.17359	0.0012953	772
773	597,529	461,889,917	27.8029	9.17754	0.0012937	773
774	599,076	463,684,824	27.8209	9.18150	0.0012920	774
775	600,625	465,484,375	27.8388	9.18545	0.0012903	775
776	602,176	467,288,576	27.8568	9.18940	0.0012887	776
777	603,729	469,097,433	27.8747	9.19335	0.0012870	777
778	605,284	470,910,952	27.8927	9.19729	0.0012853	778
779	606,841	472,729,139	27.9106	9.20123	0.0012837	779
780	608,400	474,552,000	27.9285	9.20516	0.0012821	780
781	609,961	476,379,541	27.9464	9.20910	0.0012804	781
782	611,524	478,211,768	27.9643	9.21303	0.0012788	782
783	613,089	480,048,687	27.9821	9.21695	0.0012771	783
784	614,656	481,890,304	28.0000	9.22087	0.0012755	784
785	616,225	483,736,625	28.0179	9.22479	0.0012739	785
786	617,796	485,587,656	28.0357	9.22871	0.0012723	786
787	619,369	487,443,403	28.0535	9.23262	0.0012706	787
788	620,944	489,303,872	28.0713	9.23653	0.0012690	788
789	622,521	491,169,069	28.0891	9.24043	0.0012674	789
790	624,100	493,039,000	28.1069	9.24434	0.0012658	790
791	625,681	494,913,671	28.1247	9.24823	0.0012642	791
792	627,264	496,793,088	28.1425	9.25213	0.0012626	792
793	628,849	498,677,257	28.1603	9.25602	0.0012610	793
794	630,436	500,566,184	28.1780	9.25991	0.0012594	794
795	632,025	502,459,875	28.1957	9.26380	0.0012579	795
796	633,616	504,358,336	28.2135	9.26768	0.0012563	796
797	635,209	506,261,573	28.2312	9.27156	0.0012547	797
798	636,804	508,169,592	28.2489	9.27544	0.0012531	798
799	638,401	510,082,399	28.2666	9.27931	0.0012516	799
800	640,000	512,000,000	28.2843	9.28318	0.0012500	800

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
801	641,601	513,922,401	28.3019	9.28704	0.0012484	801
802	643,204	515,849,608	28.3196	9.29091	0.0012469	802
803	644,809	517,781,627	28.3373	9.29477	0.0012453	803
804	646,416	519,718,464	28.3549	9.29862	0.0012438	804
805	648,025	521,660,125	28.3725	9.30248	0.0012422	805
806	649,636	523,606,616	28.3901	9.30633	0.0012407	806
807	651,249	525,557,943	28.4077	9.31018	0.0012392	807
808	652,864	527,514,112	28.4253	9.31402	0.0012376	808
809	654,481	529,475,129	28.4429	9.31786	0.0012361	809
810	656,100	531,441,000	28.4605	9.32170	0.0012346	810
811	657,721	533,411,731	28.4781	9.32553	0.0012330	811
812	659,344	535,387,328	28.4956	9.32936	0.0012315	812
813	660,969	537,367,797	28.5132	9.33319	0.0012300	813
814	662,596	539,353,144	28.5307	9.33702	0.0012285	814
815	664,225	541,343,375	28.5482	9.34084	0.0012270	815
816	665,856	543,338,496	28.5657	9.34466	0.0012255	816
817	667,489	545,338,513	28.5832	9.34847	0.0012240	817
818	669,124	547,343,432	28.6007	9.35229	0.0012225	818
819	670,761	549,353,259	28.6182	9.35610	0.0012210	819
820	672,400	551,368,000	28.6356	9.35990	0.0012195	820
821	674,041	553,387,661	28.6531	9.36370	0.0012180	821
822	675,684	555,412,248	28.6705	9.36751	0.0012165	822
823	677,329	557,441,767	28.6880	9.37130	0.0012151	823
824	678,976	559,476,224	28.7054	9.37510	0.0012136	824
825	680,625	561,515,625	28.7228	9.37889	0.0012121	825
826	682,276	563,559,976	28.7402	9.38268	0.0012107	826
827	683,929	565,609,283	28.7576	9.38646	0.0012092	827
828	685,584	567,663,552	28.7750	9.39024	0.0012077	828
829	687,241	569,722,789	28.7924	9.39402	0.0012063	829
830	688,900	571,787,000	28.8097	9.39780	0.0012048	830
831	690,561	573,856,191	28.8271	9.40157	0.0012034	831
832	692,224	575,930,368	28.8444	9.40534	0.0012019	832
833	693,889	578,009,537	28.8617	9.40911	0.0012005	833
834	695,556	580,093,704	28.8791	9.41287	0.0011990	834
835	697,225	582,182,875	28.8964	9.41663	0.0011976	835
836	698,896	584,277,056	28.9137	9.42039	0.0011962	836
837	700,569	586,376,253	28.9310	9.42414	0.0011947	837
838	702,244	588,480,472	28.9482	9.42789	0.0011933	838
839	703,921	590,589,719	28.9655	9.43164	0.0011919	839
840	705,600	592,704,000	28.9828	9.43538	0.0011905	840
841	707,281	594,823,321	29.0000	9.43913	0.0011891	841
842	708,964	596,947,688	29.0172	9.44287	0.0011876	842
843	710,649	599,077,107	29.0345	9.44661	0.0011862	843
844	712,336	601,211,584	29.0517	9.45034	0.0011848	844
845	714,025	603,351,125	29.0689	9.45407	0.0011834	845
846	715,716	605,495,736	29.0861	9.45780	0.0011820	846
847	717,409	607,645,423	29.1033	9.46152	0.0011806	847
848	719,104	609,800,192	29.1204	9.46525	0.0011792	848
849	720,801	611,960,049	29.1376	9.46897	0.0011779	849
850	722,500	614,125,000	29.1548	9.47268	0.0011765	850



Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
851	724,201	616,295,051	29.1719	9.47640	0.0011751	851
852	725,904	618,470,208	29.1890	9.48011	0.0011737	852
853	727,609	620,650,477	29.2062	9.48381	0.0011723	853
854	729,316	622,835,864	29.2233	9.48752	0.0011710	854
855	731,025	625,026,375	29.2404	9.49122	0.0011696	855
856	732,736	627,222,016	29.2575	9.49492	0.0011682	856
857	734,449	629,422,793	29.2746	9.49861	0.0011669	857
858	736,164	631,628,712	29.2916	9.50231	0.0011655	858
859	737,881	633,839,779	29.3087	9.50600	0.0011641	859
860	739,600	636,056,000	29.3258	9.50969	0.0011628	860
861	741,321	638,277,381	29.3428	9.51337	0.0011614	861
862	743,044	640,503,928	29.3598	9.51705	0.0011601	862
863	744,769	642,735,647	29.3769	9.52073	0.0011587	863
864	746,496	644,972,544	29.3939	9.52441	0.0011574	864
865	748,225	647,214,625	29.4109	9.52808	0.0011561	865
866	749,956	649,461,896	29.4279	9.53175	0.0011547	866
867	751,689	651,714,363	29.4449	9.53542	0.0011534	867
868	753,424	653,972,032	29.4618	9.53908	0.0011521	868
869	755,161	656,234,909	29.4788	9.54274	0.0011507	869
870	756,900	658,503,000	29.4958	9.54640	0.0011494	870
871	758,641	660,776,311	29.5127	9.55006	0.0011481	871
872	760,384	663,054,848	29.5296	9.55371	0.0011468	872
873	762,129	665,338,617	29.5466	9.55736	0.0011455	873
874	763,876	667,627,624	29.5635	9.56101	0.0011442	874
875	765,625	669,921,875	29.5804	9.56466	0.0011429	875
876	767,376	672,221,376	29.5973	9.56830	0.0011416	876
877	769,129	674,526,133	29.6142	9.57194	0.0011403	877
878	770,884	676,836,152	29.6311	9.57557	0.0011390	878
879	772,641	679,151,439	29.6479	9.57921	0.0011377	879
880	774,400	681,472,000	29.6648	9.58284	0.0011364	880
881	776,161	683,797,841	29.6816	9.58647	0.0011351	881
882	777,924	686,128,968	29.6985	9.59009	0.0011338	882
883	779,689	688,465,387	29.7153	9.59372	0.0011325	883
884	781,456	690,807,104	29.7321	9.59734	0.0011312	884
885	783,225	693,154,125	29.7489	9.60095	0.0011299	885
886	784,996	695,506,456	29.7658	9.60457	0.0011287	886
887	786,769	697,864,103	29.7825	9.60818	0.0011274	887
888	788,544	700,227,072	29.7993	9.61179	0.0011261	888
889	790,321	702,595,369	29.8161	9.61540	0.0011249	889
890	792,100	704,969,000	29.8329	9.61900	0.0011236	890
891	793,881	707,347,971	29.8496	9.62260	0.0011223	891
892	795,664	709,732,288	29.8664	9.62620	0.0011211	892
893	797,449	712,121,957	29.8831	9.62980	0.0011198	893
894	799,236	714,516,984	29.8998	9.63339	0.0011186	894
895	801,025	716,917,375	29.9166	9.63698	0.0011173	895
896	802,816	719,323,136	29.9333	9.64057	0.0011161	896
897	804,609	721,734,273	29.9500	9.64415	0.0011148	897
898	806,404	724,150,792	29.9666	9.64774	0.0011136	898
899	808,201	726,572,699	29.9833	9.65132	0.0011123	899
900	810,000	729,000,000	30.0000	9.65489	0.0011111	900

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
901	811,801	731,432,701	30.0167	9.65847	0.0011099	901
902	813,604	733,870,808	30.0333	9.66204	0.0011086	902
903	815,409	736,314,327	30.0500	9.66561	0.0011074	903
904	817,216	738,763,264	30.0666	9.66918	0.0011062	904
905	819,025	741,217,625	30.0832	9.67274	0.0011050	905
906	820,836	743,677,416	30.0998	9.67630	0.0011038	906
907	822,649	746,142,643	30.1164	9.67986	0.0011025	907
908	824,464	748,613,312	30.1330	9.68342	0.0011013	908
909	826,281	751,089,429	30.1496	9.68697	0.0011001	909
910	828,100	753,571,000	30.1662	9.69052	0.0010989	910
911	829,921	756,058,031	30.1828	9.69407	0.0010977	911
912	831,744	758,550,528	30.1993	9.69762	0.0010965	912
913	833,569	761,048,497	30.2159	9.70116	0.0010953	913
914	835,396	763,551,944	30.2324	9.70470	0.0010941	914
915	837,225	766,060,875	30.2490	9.70824	0.0010929	915
916	839,056	768,575,296	30.2655	9.71177	0.0010917	916
917	840,889	771,095,213	30.2820	9.71531	0.0010905	917
918	842,724	773,620,632	30.2985	9.71884	0.0010893	918
919	844,561	776,151,559	30.3150	9.72236	0.0010881	919
920	846,400	778,688,000	30.3315	9.72589	0.0010870	920
921	848,241	781,229,961	30.3480	9.72941	0.0010858	921
922	850,084	783,777,448	30.3645	9.73293	0.0010846	922
923	851,929	786,330,467	30.3809	9.73645	0.0010834	923
924	853,776	788,889,024	30.3974	9.73996	0.0010823	924
925	855,625	791,453,125	30.4138	9.74348	0.0010811	925
926	857,476	794,022,776	30.4302	9.74699	0.0010799	926
927	859,329	796,597,983	30.4467	9.75049	0.0010787	927
928	861,184	799,178,752	30.4631	9.75400	0.0010776	928
929	863,041	801,765,089	30.4795	9.75750	0.0010764	929
930	864,900	804,357,000	30.4959	9.76100	0.0010753	930
931	866,761	806,954,491	30.5123	9.76450	0.0010741	931
932	868,624	809,557,568	30.5287	9.76799	0.0010730	932
933	870,489	812,166,237	30.5450	9.77148	0.0010718	933
934	872,356	814,780,504	30.5614	9.77497	0.0010707	934
935	874,225	817,400,375	30.5778	9.77846	0.0010695	935
936	876,096	820,025,856	30.5941	9.78195	0.0010684	936
937	877,969	822,656,953	30.6105	9.78543	0.0010672	937
938	879,844	825,293,672	30.6268	9.78891	0.0010661	938
939	881,721	827,936,019	30.6431	9.79239	0.0010650	939
940	883,600	830,584,000	30.6594	9.79586	0.0010638	940
941	885,481	833,237,621	30.6757	9.79933	0.0010627	941
942	887,364	835,896,888	30.6920	9.80280	0.0010616	942
943	889,249	838,561,807	30.7083	9.80627	0.0010604	943
944	891,136	841,232,384	30.7246	9.80974	0.0010593	944
945	893,025	843,908,625	30.7409	9.81320	0.0010582	945
946	894,916	846,590,536	30.7571	9.81666	0.0010571	946
947	896,809	849,278,123	30.7734	9.82012	0.0010560	947
948	898,704	851,971,392	30.7896	9.82357	0.0010549	948
949	900,601	854,670,349	30.8058	9.82703	0.0010537	949
950	902,500	857,375,000	30.8221	9.83048	0.0010526	950

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
951	904,401	860,085,351	30.8383	9.83392	0.0010515	951
952	906,304	862,801,408	30.8545	9.83737	0.0010504	952
953	908,209	865,523,177	30.8707	9.84081	0.0010493	953
954	910,116	868,250,664	30.8869	9.84425	0.0010482	954
955	912,025	870,983,875	30.9031	9.84769	0.0010471	955
956	913,936	873,722,816	30.9192	9.85113	0.0010460	956
957	915,849	876,467,493	30.9354	9.85456	0.0010449	957
958	917,764	879,217,912	30.9516	9.85799	0.0010438	958
959	919,681	881,974,079	30.9677	9.86142	0.0010428	959
960	921,600	884,736,000	30.9839	9.86485	0.0010417	960
961	923,521	887,503,681	31.0000	9.86827	0.0010406	961
962	925,444	890,277,128	31.0161	9.87169	0.0010395	962
963	927,369	893,056,347	31.0322	9.87511	0.0010384	963
964	929,296	895,841,344	31.0483	9.87853	0.0010373	964
965	931,225	898,632,125	31.0644	9.88195	0.0010363	965
966	933,156	901,428,696	31.0805	9.88536	0.0010352	966
967	935,089	904,231,063	31.0966	9.88877	0.0010341	967
968	937,024	907,039,232	31.1127	9.89217	0.0010331	968
969	938,961	909,853,209	31.1288	9.89558	0.0010320	969
970	940,900	912,673,000	31.1448	9.89898	0.0010309	970
971	942,841	915,498,611	31.1609	9.90238	0.0010299	971
972	944,784	918,330,048	31.1769	9.90578	0.0010288	972
973	946,729	921,167,317	31.1929	9.90918	0.0010277	973
974	948,676	924,010,424	31.2090	9.91257	0.0010267	974
975	950,625	926,859,375	31.2250	9.91596	0.0010256	975
976	952,576	929,714,176	31.2410	9.91935	0.0010246	976
977	954,529	932,574,833	31.2570	9.92274	0.0010235	977
978	956,484	935,441,352	31.2730	9.92612	0.0010225	978
979	958,441	938,313,739	31.2890	9.92950	0.0010215	979
980	960,400	941,192,000	31.3050	9.93288	0.0010204	980
981	962,361	944,076,141	31.3209	9.93626	0.0010194	981
982	964,324	946,966,168	31.3369	9.93964	0.0010183	982
983	966,289	949,862,087	31.3528	9.94301	0.0010173	983
984	968,256	952,763,904	31.3688	9.94638	0.0010163	984
985	970,225	955,671,625	31.3847	9.94975	0.0010152	985
986	972,196	958,585,256	31.4006	9.95311	0.0010142	986
987	974,169	961,504,803	31.4166	9.95648	0.0010132	987
988	976,144	964,430,272	31.4325	9.95984	0.0010121	988
989	978,121	967,361,669	31.4484	9.96320	0.0010111	989
990	980,100	970,299,000	31.4643	9.96655	0.0010101	990
991	982,081	973,242,271	31.4802	9.96991	0.0010091	991
992	984,064	976,191,488	31.4960	9.97326	0.0010081	992
993	986,049	979,146,657	31.5119	9.97661	0.0010070	993
994	988,036	982,107,784	31.5278	9.97996	0.0010060	994
995	990,025	985,074,875	31.5436	9.98331	0.0010050	995
996	992,016	988,047,936	31.5595	9.98665	0.0010040	996
997	994,009	991,026,973	31.5753	9.98999	0.0010030	997
998	996,004	994,011,992	31.5911	9.99333	0.0010020	998
999	998,001	997,002,999	31.6070	9.99667	0.0010010	999
1000	1,000,000	1,000,000,000	31.6228	10.00000	0.0010000	1000

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1001	1,002,001	1,003,003,001	31.6386	10.0033	0.0009990	1001
1002	1,004,004	1,006,012,008	31.6544	10.0067	0.0009980	1002
1003	1,006,009	1,009,027,027	31.6702	10.0100	0.0009970	1003
1004	1,008,016	1,012,048,064	31.6860	10.0133	0.0009960	1004
1005	1,010,025	1,015,075,125	31.7017	10.0166	0.0009950	1005
1006	1,012,036	1,018,108,216	31.7175	10.0200	0.0009940	1006
1007	1,014,049	1,021,147,343	31.7333	10.0233	0.0009930	1007
1008	1,016,064	1,024,192,512	31.7490	10.0266	0.0009921	1008
1009	1,018,081	1,027,243,729	31.7648	10.0299	0.0009911	1009
1010	1,020,100	1,030,301,000	31.7805	10.0332	0.0009901	1010
1011	1,022,121	1,033,364,331	31.7962	10.0365	0.0009891	1011
1012	1,024,144	1,036,433,728	31.8119	10.0398	0.0009881	1012
1013	1,026,169	1,039,509,197	31.8277	10.0431	0.0009872	1013
1014	1,028,196	1,042,590,744	31.8434	10.0465	0.0009862	1014
1015	1,030,225	1,045,678,375	31.8591	10.0498	0.0009852	1015
1016	1,032,256	1,048,772,096	31.8748	10.0531	0.0009843	1016
1017	1,034,289	1,051,871,913	31.8904	10.0563	0.0009833	1017
1018	1,036,324	1,054,977,832	31.9061	10.0596	0.0009823	1018
1019	1,038,361	1,058,089,859	31.9218	10.0629	0.0009814	1019
1020	1,040,400	1,061,208,000	31.9374	10.0662	0.0009804	1020
1021	1,042,441	1,064,332,261	31.9531	10.0695	0.0009794	1021
1022	1,044,484	1,067,462,648	31.9687	10.0728	0.0009785	1022
1023	1,046,529	1,070,599,167	31.9844	10.0761	0.0009775	1023
1024	1,048,576	1,073,741,824	32.0000	10.0794	0.0009766	1024
1025	1,050,625	1,076,890,625	32.0156	10.0826	0.0009756	1025
1026	1,052,676	1,080,045,576	32.0312	10.0859	0.0009747	1026
1027	1,054,729	1,083,206,683	32.0468	10.0892	0.0009737	1027
1028	1,056,784	1,086,373,952	32.0624	10.0925	0.0009728	1028
1029	1,058,841	1,089,547,389	32.0780	10.0957	0.0009718	1029
1030	1,060,900	1,092,727,000	32.0936	10.0990	0.0009709	1030
1031	1,062,961	1,095,912,791	32.1092	10.1023	0.0009699	1031
1032	1,065,024	1,099,104,768	32.1248	10.1055	0.0009690	1032
1033	1,067,089	1,102,302,937	32.1403	10.1088	0.0009681	1033
1034	1,069,156	1,105,507,304	32.1559	10.1121	0.0009671	1034
1035	1,071,225	1,108,717,875	32.1714	10.1153	0.0009662	1035
1036	1,073,296	1,111,934,656	32.1870	10.1186	0.0009653	1036
1037	1,075,369	1,115,157,653	32.2025	10.1218	0.0009643	1037
1038	1,077,444	1,118,386,872	32.2180	10.1251	0.0009634	1038
1039	1,079,521	1,121,622,319	32.2335	10.1283	0.0009625	1039
1040	1,081,600	1,124,864,000	32.2490	10.1316	0.0009615	1040
1041	1,083,681	1,128,111,921	32.2645	10.1348	0.0009606	1041
1042	1,085,764	1,131,366,088	32.2800	10.1381	0.0009597	1042
1043	1,087,849	1,134,626,507	32.2955	10.1413	0.0009588	1043
1044	1,089,936	1,137,893,184	32.3110	10.1446	0.0009579	1044
1045	1,092,025	1,141,166,125	32.3265	10.1478	0.0009569	1045
1046	1,094,116	1,144,445,336	32.3419	10.1510	0.0009560	1046
1047	1,096,209	1,147,730,823	32.3574	10.1543	0.0009551	1047
1048	1,098,304	1,151,022,592	32.3728	10.1575	0.0009542	1048
1049	1,100,401	1,154,320,649	32.3883	10.1607	0.0009533	1049
1050	1,102,500	1,157,625,000	32.4037	10.1640	0.0009524	1050

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1051	1,104,601	1,160,935,651	32.4191	10.1672	0.0009515	1051
1052	1,106,704	1,164,252,608	32.4345	10.1704	0.0009506	1052
1053	1,108,809	1,167,575,877	32.4500	10.1736	0.0009497	1053
1054	1,110,916	1,170,905,464	32.4654	10.1769	0.0009488	1054
1055	1,113,025	1,174,241,375	32.4808	10.1801	0.0009479	1055
1056	1,115,136	1,177,583,616	32.4962	10.1833	0.0009470	1056
1057	1,117,249	1,180,932,193	32.5115	10.1865	0.0009461	1057
1058	1,119,364	1,184,287,112	32.5269	10.1897	0.0009452	1058
1059	1,121,481	1,187,648,379	32.5423	10.1929	0.0009443	1059
1060	1,123,600	1,191,016,000	32.5576	10.1961	0.0009434	1060
1061	1,125,721	1,194,389,981	32.5730	10.1993	0.0009425	1061
1062	1,127,844	1,197,770,328	32.5883	10.2025	0.0009416	1062
1063	1,129,969	1,201,157,047	32.6037	10.2057	0.0009407	1063
1064	1,132,096	1,204,550,144	32.6190	10.2089	0.0009398	1064
1065	1,134,225	1,207,949,625	32.6343	10.2121	0.0009390	1065
1066	1,136,356	1,211,355,496	32.6497	10.2153	0.0009381	1066
1067	1,138,489	1,214,767,763	32.6650	10.2185	0.0009372	1067
1068	1,140,624	1,218,186,432	32.6803	10.2217	0.0009363	1068
1069	1,142,761	1,221,611,509	32.6956	10.2249	0.0009355	1069
1070	1,144,900	1,225,043,000	32.7109	10.2281	0.0009346	1070
1071	1,147,041	1,228,480,911	32.7261	10.2313	0.0009337	1071
1072	1,149,184	1,231,925,248	32.7414	10.2345	0.0009328	1072
1073	1,151,329	1,235,376,017	32.7567	10.2376	0.0009320	1073
1074	1,153,476	1,238,833,224	32.7719	10.2408	0.0009311	1074
1075	1,155,625	1,242,296,875	32.7872	10.2440	0.0009302	1075
1076	1,157,776	1,245,766,976	32.8024	10.2472	0.0009294	1076
1077	1,159,929	1,249,243,533	32.8177	10.2503	0.0009285	1077
1078	1,162,084	1,252,726,552	32.8329	10.2535	0.0009276	1078
1079	1,164,241	1,256,216,039	32.8481	10.2567	0.0009268	1079
1080	1,166,400	1,259,712,000	32.8634	10.2599	0.0009259	1080
1081	1,168,561	1,263,214,441	32.8786	10.2630	0.0009251	1081
1082	1,170,724	1,266,723,368	32.8938	10.2662	0.0009242	1082
1083	1,172,889	1,270,238,787	32.9090	10.2693	0.0009234	1083
1084	1,175,056	1,273,760,704	32.9242	10.2725	0.0009225	1084
1085	1,177,225	1,277,289,125	32.9393	10.2757	0.0009217	1085
1086	1,179,396	1,280,824,056	32.9545	10.2788	0.0009208	1086
1087	1,181,569	1,284,365,503	32.9697	10.2820	0.0009200	1087
1088	1,183,744	1,287,913,472	32.9848	10.2851	0.0009191	1088
1089	1,185,921	1,291,467,969	33.0000	10.2883	0.0009183	1089
1090	1,188,100	1,295,029,000	33.0151	10.2914	0.0009174	1090
1091	1,190,281	1,298,596,571	33.0303	10.2946	0.0009166	1091
1092	1,192,464	1,302,170,688	33.0454	10.2977	0.0009158	1092
1093	1,194,649	1,305,751,357	33.0606	10.3009	0.0009149	1093
1094	1,196,836	1,309,338,584	33.0757	10.3040	0.0009141	1094
1095	1,199,025	1,312,932,375	33.0908	10.3071	0.0009132	1095
1096	1,201,216	1,316,532,736	33.1059	10.3103	0.0009124	1096
1097	1,203,409	1,320,139,673	33.1210	10.3134	0.0009116	1097
1098	1,205,604	1,323,753,192	33.1361	10.3165	0.0009107	1098
1099	1,207,801	1,327,373,299	33.1512	10.3197	0.0009099	1099
1100	1,210,000	1,331,000,000	33.1662	10.3228	0.0009091	1100



## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1101	1,212,201	1,334,633,301	33.1813	10.3259	0.0009083	1101
1102	1,214,404	1,338,273,208	33.1964	10.3291	0.0009074	1102
1103	1,216,609	1,341,919,727	33.2114	10.3322	0.0009066	1103
1104	1,218,816	1,345,572,864	33.2265	10.3353	0.0009058	1104
1105	1,221,025	1,349,232,625	33.2415	10.3384	0.0009050	1105
1106	1,223,236	1,352,899,016	33.2566	10.3415	0.0009042	1106
1107	1,225,449	1,356,572,043	33.2716	10.3447	0.0009033	1107
1108	1,227,664	1,360,251,712	33.2866	10.3478	0.0009025	1108
1109	1,229,881	1,363,938,029	33.3017	10.3509	0.0009017	1109
1110	1,232,100	1,367,631,000	33.3167	10.3540	0.0009009	1110
1111	1,234,321	1,371,330,631	33.3317	10.3571	0.0009001	1111
1112	1,236,544	1,375,036,928	33.3467	10.3602	0.0008993	1112
1113	1,238,769	1,378,749,897	33.3617	10.3633	0.0008985	1113
1114	1,240,996	1,382,469,544	33.3766	10.3664	0.0008977	1114
1115	1,243,225	1,386,195,875	33.3916	10.3695	0.0008969	1115
1116	1,245,456	1,389,928,896	33.4066	10.3726	0.0008961	1116
1117	1,247,689	1,393,668,613	33.4215	10.3757	0.0008953	1117
1118	1,249,924	1,397,415,032	33.4365	10.3788	0.0008945	1118
1119	1,252,161	1,401,168,159	33.4515	10.3819	0.0008937	1119
1120	1,254,400	1,404,928,000	33.4664	10.3850	0.0008929	1120
1121	1,256,641	1,408,694,561	33.4813	10.3881	0.0008921	1121
1122	1,258,884	1,412,467,848	33.4963	10.3912	0.0008913	1122
1123	1,261,129	1,416,247,867	33.5112	10.3943	0.0008905	1123
1124	1,263,376	1,420,034,624	33.5261	10.3973	0.0008897	1124
1125	1,265,625	1,423,828,125	33.5410	10.4004	0.0008889	1125
1126	1,267,876	1,427,628,376	33.5559	10.4035	0.0008881	1126
1127	1,270,129	1,431,435,383	33.5708	10.4066	0.0008873	1127
1128	1,272,384	1,435,249,152	33.5857	10.4097	0.0008865	1128
1129	1,274,641	1,439,069,689	33.6006	10.4127	0.0008857	1129
1130	1,276,900	1,442,897,000	33.6155	10.4158	0.0008850	1130
1131	1,279,161	1,446,731,091	33.6303	10.4189	0.0008842	1131
1132	1,281,424	1,450,571,968	33.6452	10.4219	0.0008834	1132
1133	1,283,689	1,454,419,637	33.6601	10.4250	0.0008826	1133
1134	1,285,956	1,458,274,104	33.6749	10.4281	0.0008818	1134
1135	1,288,225	1,462,135,375	33.6898	10.4311	0.0008811	1135
1136	1,290,496	1,466,003,456	33.7046	10.4342	0.0008803	1136
1137	1,292,769	1,469,878,353	33.7194	10.4373	0.0008795	1137
1138	1,295,044	1,473,760,072	33.7342	10.4403	0.0008787	1138
1139	1,297,321	1,477,648,619	33.7491	10.4434	0.0008780	1139
1140	1,299,600	1,481,544,000	33.7639	10.4464	0.0008772	1140
1141	1,301,881	1,485,446,221	33.7787	10.4495	0.0008764	1141
1142	1,304,164	1,489,355,288	33.7935	10.4525	0.0008757	1142
1143	1,306,449	1,493,271,207	33.8083	10.4556	0.0008749	1143
1144	1,308,736	1,497,193,984	33.8231	10.4586	0.0008741	1144
1145	1,311,025	1,501,123,625	33.8378	10.4617	0.0008734	1145
1146	1,313,316	1,505,060,136	33.8526	10.4647	0.0008726	1146
1147	1,315,609	1,509,003,523	33.8674	10.4678	0.0008718	1147
1148	1,317,904	1,512,953,792	33.8821	10.4708	0.0008711	1148
1149	1,320,201	1,516,910,949	33.8969	10.4739	0.0008703	1149
1150	1,322,500	1,520,875,000	33.9116	10.4769	0.0008696	1150

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1151	1,324,801	1,524,845,951	33.9264	10.4799	0.0008688	1151
1152	1,327,104	1,528,823,808	33.9411	10.4830	0.0008681	1152
1153	1,329,409	1,532,808,577	33.9559	10.4860	0.0008673	1153
1154	1,331,716	1,536,800,264	33.9706	10.4890	0.0008666	1154
1155	1,334,025	1,540,798,875	33.9853	10.4921	0.0008658	1155
1156	1,336,336	1,544,804,416	34.0000	10.4951	0.0008651	1156
1157	1,338,649	1,548,816,893	34.0147	10.4981	0.0008643	1157
1158	1,340,964	1,552,836,312	34.0294	10.5011	0.0008636	1158
1159	1,343,281	1,556,862,679	34.0441	10.5042	0.0008628	1159
1160	1,345,600	1,560,896,000	34.0588	10.5072	0.0008621	1160
1161	1,347,921	1,564,936,281	34.0735	10.5102	0.0008613	1161
1162	1,350,244	1,568,983,528	34.0881	10.5132	0.0008606	1162
1163	1,352,569	1,573,037,747	34.1028	10.5162	0.0008598	1163
1164	1,354,896	1,577,098,944	34.1174	10.5192	0.0008591	1164
1165	1,357,225	1,581,167,125	34.1321	10.5223	0.0008584	1165
1166	1,359,556	1,585,242,296	34.1467	10.5253	0.0008576	1166
1167	1,361,889	1,589,324,463	34.1614	10.5283	0.0008569	1167
1168	1,364,224	1,593,413,632	34.1760	10.5313	0.0008562	1168
1169	1,366,561	1,597,509,809	34.1906	10.5343	0.0008554	1169
1170	1,368,900	1,601,613,000	34.2053	10.5373	0.0008547	1170
1171	1,371,241	1,605,723,211	34.2199	10.5403	0.0008540	1171
1172	1,373,584	1,609,840,448	34.2345	10.5433	0.0008532	1172
1173	1,375,929	1,613,964,717	34.2491	10.5463	0.0008525	1173
1174	1,378,276	1,618,096,024	34.2637	10.5493	0.0008518	1174
1175	1,380,625	1,622,234,375	34.2783	10.5523	0.0008511	1175
1176	1,382,976	1,626,379,776	34.2929	10.5553	0.0008503	1176
1177	1,385,329	1,630,532,233	34.3074	10.5583	0.0008496	1177
1178	1,387,684	1,634,691,752	34.3220	10.5612	0.0008489	1178
1179	1,390,041	1,638,858,339	34.3366	10.5642	0.0008482	1179
1180	1,392,400	1,643,032,000	34.3511	10.5672	0.0008475	1180
1181	1,394,761	1,647,212,741	34.3657	10.5702	0.0008467	1181
1182	1,397,124	1,651,400,568	34.3802	10.5732	0.0008460	1182
1183	1,399,489	1,655,595,487	34.3948	10.5762	0.0008453	1183
1184	1,401,856	1,659,797,504	34.4093	10.5791	0.0008446	1184
1185	1,404,225	1,664,006,625	34.4238	10.5821	0.0008439	1185
1186	1,406,596	1,668,222,856	34.4384	10.5851	0.0008432	1186
1187	1,408,969	1,672,446,203	34.4529	10.5881	0.0008425	1187
1188	1,411,344	1,676,676,672	34.4674	10.5910	0.0008418	1188
1189	1,413,721	1,680,914,269	34.4819	10.5940	0.0008410	1189
1190	1,416,100	1,685,159,000	34.4964	10.5970	0.0008403	1190
1191	1,418,481	1,689,410,871	34.5109	10.6000	0.0008396	1191
1192	1,420,864	1,693,669,888	34.5254	10.6029	0.0008389	1192
1193	1,423,249	1,697,936,057	34.5398	10.6059	0.0008382	1193
1194	1,425,636	1,702,209,384	34.5543	10.6088	0.0008375	1194
1195	1,428,025	1,706,489,875	34.5688	10.6118	0.0008368	1195
1196	1,430,416	1,710,777,536	34.5832	10.6148	0.0008361	1196
1197	1,432,809	1,715,072,373	34.5977	10.6177	0.0008354	1197
1198	1,435,204	1,719,374,392	34.6121	10.6207	0.0008347	1198
1199	1,437,601	1,723,683,599	34.6266	10.6236	0.0008340	1199
1200	1,440,000	1,728,000,000	34.6410	10.6266	0.0008333	1200

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1201	1,442,401	1,732,323,601	34.6554	10.6295	0.0008326	1201
1202	1,444,804	1,736,654,408	34.6699	10.6325	0.0008319	1202
1203	1,447,209	1,740,992,427	34.6843	10.6354	0.0008313	1203
1204	1,449,616	1,745,337,664	34.6987	10.6384	0.0008306	1204
1205	1,452,025	1,749,690,125	34.7131	10.6413	0.0008299	1205
1206	1,454,436	1,754,049,816	34.7275	10.6443	0.0008292	1206
1207	1,456,849	1,758,416,743	34.7419	10.6472	0.0008285	1207
1208	1,459,264	1,762,790,912	34.7563	10.6501	0.0008278	1208
1209	1,461,681	1,767,172,329	34.7707	10.6531	0.0008271	1209
1210	1,464,100	1,771,561,000	34.7851	10.6560	0.0008264	1210
1211	1,466,521	1,775,956,931	34.7994	10.6590	0.0008258	1211
1212	1,468,944	1,780,360,128	34.8138	10.6619	0.0008251	1212
1213	1,471,369	1,784,770,597	34.8281	10.6648	0.0008244	1213
1214	1,473,796	1,789,188,344	34.8425	10.6678	0.0008237	1214
1215	1,476,225	1,793,613,375	34.8569	10.6707	0.0008230	1215
1216	1,478,656	1,798,045,696	34.8712	10.6736	0.0008224	1216
1217	1,481,089	1,802,485,313	34.8855	10.6765	0.0008217	1217
1218	1,483,524	1,806,932,232	34.8999	10.6795	0.0008210	1218
1219	1,485,961	1,811,386,459	34.9142	10.6824	0.0008203	1219
1220	1,488,400	1,815,848,000	34.9285	10.6853	0.0008197	1220
1221	1,490,841	1,820,316,861	34.9428	10.6882	0.0008190	1221
1222	1,493,284	1,824,793,048	34.9571	10.6911	0.0008183	1222
1223	1,495,729	1,829,276,567	34.9714	10.6940	0.0008177	1223
1224	1,498,176	1,833,767,424	34.9857	10.6970	0.0008170	1224
1225	1,500,625	1,838,265,625	35.0000	10.6999	0.0008163	1225
1226	1,503,076	1,842,771,176	35.0143	10.7028	0.0008157	1226
1227	1,505,529	1,847,284,083	35.0286	10.7057	0.0008150	1227
1228	1,507,984	1,851,804,352	35.0428	10.7086	0.0008143	1228
1229	1,510,441	1,856,331,989	35.0571	10.7115	0.0008137	1229
1230	1,512,900	1,860,867,000	35.0714	10.7144	0.0008130	1230
1231	1,515,361	1,865,409,391	35.0856	10.7173	0.0008123	1231
1232	1,517,824	1,869,959,168	35.0999	10.7202	0.0008117	1232
1233	1,520,289	1,874,516,337	35.1141	10.7231	0.0008110	1233
1234	1,522,756	1,879,080,904	35.1283	10.7260	0.0008104	1234
1235	1,525,225	1,883,652,875	35.1426	10.7289	0.0008097	1235
1236	1,527,696	1,888,232,256	35.1568	10.7318	0.0008091	1236
1237	1,530,169	1,892,819,053	35.1710	10.7347	0.0008084	1237
1238	1,532,644	1,897,413,272	35.1852	10.7376	0.0008078	1238
1239	1,535,121	1,902,014,919	35.1994	10.7405	0.0008071	1239
1240	1,537,600	1,906,624,000	35.2136	10.7434	0.0008065	1240
1241	1,540,081	1,911,240,521	35.2278	10.7463	0.0008058	1241
1242	1,542,564	1,915,864,488	35.2420	10.7491	0.0008052	1242
1243	1,545,049	1,920,495,907	35.2562	10.7520	0.0008045	1243
1244	1,547,536	1,925,134,784	35.2704	10.7549	0.0008039	1244
1245	1,550,025	1,929,781,125	35.2846	10.7578	0.0008032	1245
1246	1,552,516	1,934,434,936	35.2987	10.7607	0.0008026	1246
1247	1,555,009	1,939,096,223	35.3129	10.7635	0.0008019	1247
1248	1,557,504	1,943,764,992	35.3270	10.7664	0.0008013	1248
1249	1,560,001	1,948,441,249	35.3412	10.7693	0.0008006	1249
1250	1,562,500	1,953,125,000	35.3553	10.7722	0.0008000	1250



## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1251	1,565,001	1,957,816,251	35.3695	10.7750	0.0007994	1251
1252	1,567,504	1,962,515,008	35.3836	10.7779	0.0007987	1252
1253	1,570,009	1,967,221,277	35.3977	10.7808	0.0007981	1253
1254	1,572,516	1,971,935,064	35.4119	10.7837	0.0007974	1254
1255	1,575,025	1,976,656,375	35.4260	10.7865	0.0007968	1255
1256	1,577,536	1,981,385,216	35.4401	10.7894	0.0007962	1256
1257	1,580,049	1,986,121,593	35.4542	10.7922	0.0007955	1257
1258	1,582,564	1,990,865,512	35.4683	10.7951	0.0007949	1258
1259	1,585,081	1,995,616,979	35.4824	10.7980	0.0007943	1259
1260	1,587,600	2,000,376,000	35.4965	10.8008	0.0007937	1260
1261	1,590,121	2,005,142,581	35.5106	10.8037	0.0007930	1261
1262	1,592,644	2,009,916,728	35.5246	10.8065	0.0007924	1262
1263	1,595,169	2,014,698,447	35.5387	10.8094	0.0007918	1263
1264	1,597,696	2,019,487,744	35.5528	10.8122	0.0007911	1264
1265	1,600,225	2,024,284,625	35.5668	10.8151	0.0007905	1265
1266	1,602,756	2,029,089,096	35.5809	10.8179	0.0007899	1266
1267	1,605,289	2,033,901,163	35.5949	10.8208	0.0007893	1267
1268	1,607,824	2,038,720,832	35.6090	10.8236	0.0007886	1268
1269	1,610,361	2,043,548,109	35.6230	10.8265	0.0007880	1269
1270	1,612,900	2,048,383,000	35.6371	10.8293	0.0007874	1270
1271	1,615,441	2,053,225,511	35.6511	10.8322	0.0007868	1271
1272	1,617,984	2,058,075,648	35.6651	10.8350	0.0007862	1272
1273	1,620,529	2,062,933,417	35.6791	10.8378	0.0007855	1273
1274	1,623,076	2,067,798,824	35.6931	10.8407	0.0007849	1274
1275	1,625,625	2,072,671,875	35.7071	10.8435	0.0007843	1275
1276	1,628,176	2,077,552,576	35.7211	10.8463	0.0007837	1276
1277	1,630,729	2,082,440,933	35.7351	10.8492	0.0007831	1277
1278	1,633,284	2,087,336,952	35.7491	10.8520	0.0007825	1278
1279	1,635,841	2,092,240,639	35.7631	10.8548	0.0007819	1279
1280	1,638,400	2,097,152,000	35.7771	10.8577	0.0007813	1280
1281	1,640,961	2,102,071,041	35.7911	10.8605	0.0007806	1281
1282	1,643,524	2,106,997,768	35.8050	10.8633	0.0007800	1282
1283	1,646,089	2,111,932,187	35.8190	10.8661	0.0007794	1283
1284	1,648,656	2,116,874,304	35.8329	10.8690	0.0007788	1284
1285	1,651,225	2,121,824,125	35.8469	10.8718	0.0007782	1285
1286	1,653,796	2,126,781,656	35.8608	10.8746	0.0007776	1286
1287	1,656,369	2,131,746,903	35.8748	10.8774	0.0007770	1287
1288	1,658,944	2,136,719,872	35.8887	10.8802	0.0007764	1288
1289	1,661,521	2,141,700,569	35.9026	10.8831	0.0007758	1289
1290	1,664,100	2,146,689,000	35.9166	10.8859	0.0007752	1290
1291	1,666,681	2,151,685,171	35.9305	10.8887	0.0007746	1291
1292	1,669,264	2,156,689,088	35.9444	10.8915	0.0007740	1292
1293	1,671,849	2,161,700,757	35.9583	10.8943	0.0007734	1293
1294	1,674,436	2,166,720,184	35.9722	10.8971	0.0007728	1294
1295	1,677,025	2,171,747,375	35.9861	10.8999	0.0007722	1295
1296	1,679,616	2,176,782,336	36.0000	10.9027	0.0007716	1296
1297	1,682,209	2,181,825,073	36.0139	10.9055	0.0007710	1297
1298	1,684,804	2,186,875,592	36.0278	10.9083	0.0007704	1298
1299	1,687,401	2,191,933,899	36.0416	10.9111	0.0007698	1299
1300	1,690,000	2,197,000,000	36.0555	10.9139	0.0007692	1300

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1301	1,692,601	2,202,073,901	36.0694	10.9167	0.0007686	1301
1302	1,695,204	2,207,155,608	36.0832	10.9195	0.0007680	1302
1303	1,697,809	2,212,245,127	36.0971	10.9223	0.0007675	1303
1304	1,700,416	2,217,342,464	36.1109	10.9251	0.0007669	1304
1305	1,703,025	2,222,447,625	36.1248	10.9279	0.0007663	1305
1306	1,705,636	2,227,560,616	36.1386	10.9307	0.0007657	1306
1307	1,708,249	2,232,681,443	36.1525	10.9335	0.0007651	1307
1308	1,710,864	2,237,810,112	36.1663	10.9363	0.0007645	1308
1309	1,713,481	2,242,946,629	36.1801	10.9391	0.0007639	1309
1310	1,716,100	2,248,091,000	36.1939	10.9418	0.0007634	1310
1311	1,718,721	2,253,243,231	36.2077	10.9446	0.0007628	1311
1312	1,721,344	2,258,403,328	36.2215	10.9474	0.0007622	1312
1313	1,723,969	2,263,571,297	36.2353	10.9502	0.0007616	1313
1314	1,726,596	2,268,747,144	36.2491	10.9530	0.0007610	1314
1315	1,729,225	2,273,930,875	36.2629	10.9557	0.0007605	1315
1316	1,731,856	2,279,122,496	36.2767	10.9585	0.0007599	1316
1317	1,734,489	2,284,322,013	36.2905	10.9613	0.0007593	1317
1318	1,737,124	2,289,529,432	36.3043	10.9641	0.0007587	1318
1319	1,739,761	2,294,744,759	36.3180	10.9668	0.0007582	1319
1320	1,742,400	2,299,968,000	36.3318	10.9696	0.0007576	1320
1321	1,745,041	2,305,199,161	36.3456	10.9724	0.0007570	1321
1322	1,747,684	2,310,438,248	36.3593	10.9752	0.0007564	1322
1323	1,750,329	2,315,685,267	36.3731	10.9779	0.0007559	1323
1324	1,752,976	2,320,940,224	36.3868	10.9807	0.0007553	1324
1325	1,755,625	2,326,203,125	36.4005	10.9834	0.0007547	1325
1326	1,758,276	2,331,473,976	36.4143	10.9862	0.0007541	1326
1327	1,760,929	2,336,752,783	36.4280	10.9890	0.0007536	1327
1328	1,763,584	2,342,039,552	36.4417	10.9917	0.0007530	1328
1329	1,766,241	2,347,334,289	36.4555	10.9945	0.0007524	1329
1330	1,768,900	2,352,637,000	36.4692	10.9972	0.0007519	1330
1331	1,771,561	2,357,947,691	36.4829	11.0000	0.0007513	1331
1332	1,774,224	2,363,266,368	36.4966	11.0028	0.0007508	1332
1333	1,776,889	2,368,593,037	36.5103	11.0055	0.0007502	1333
1334	1,779,556	2,373,927,704	36.5240	11.0083	0.0007496	1334
1335	1,782,225	2,379,270,375	36.5377	11.0110	0.0007491	1335
1336	1,784,896	2,384,621,056	36.5513	11.0138	0.0007485	1336
1337	1,787,569	2,389,979,753	36.5650	11.0165	0.0007479	1337
1338	1,790,244	2,395,346,472	36.5787	11.0193	0.0007474	1338
1339	1,792,921	2,400,721,219	36.5923	11.0220	0.0007468	1339
1340	1,795,600	2,406,104,000	36.6060	11.0247	0.0007463	1340
1341	1,798,281	2,411,494,821	36.6197	11.0275	0.0007457	1341
1342	1,800,964	2,416,893,688	36.6333	11.0302	0.0007452	1342
1343	1,803,649	2,422,300,607	36.6470	11.0330	0.0007446	1343
1344	1,806,336	2,427,715,584	36.6606	11.0357	0.0007440	1344
1345	1,809,025	2,433,138,625	36.6742	11.0384	0.0007435	1345
1346	1,811,716	2,438,569,736	36.6879	11.0412	0.0007429	1346
1347	1,814,409	2,444,008,923	36.7015	11.0439	0.0007424	1347
1348	1,817,104	2,449,456,192	36.7151	11.0466	0.0007418	1348
1349	1,819,801	2,454,911,549	36.7287	11.0494	0.0007413	1349
1350	1,822,500	2,460,375,000	36.7423	11.0521	0.0007407	1350

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1351	1,825,201	2,465,846,551	36.7560	11.0548	0.0007402	1351
1352	1,827,904	2,471,326,208	36.7696	11.0575	0.0007396	1352
1353	1,830,609	2,476,813,977	36.7831	11.0603	0.0007391	1353
1354	1,833,316	2,482,309,864	36.7967	11.0630	0.0007386	1354
1355	1,836,025	2,487,813,875	36.8103	11.0657	0.0007380	1355
1356	1,838,736	2,493,326,016	36.8239	11.0684	0.0007375	1356
1357	1,841,449	2,498,846,293	36.8375	11.0712	0.0007369	1357
1358	1,844,164	2,504,374,712	36.8511	11.0739	0.0007364	1358
1359	1,846,881	2,509,911,279	36.8646	11.0766	0.0007358	1359
1360	1,849,600	2,515,456,000	36.8782	11.0793	0.0007353	1360
1361	1,852,321	2,521,008,881	36.8917	11.0820	0.0007348	1361
1362	1,855,044	2,526,569,928	36.9053	11.0847	0.0007342	1362
1363	1,857,769	2,532,139,147	36.9188	11.0875	0.0007337	1363
1364	1,860,496	2,537,716,544	36.9324	11.0902	0.0007331	1364
1365	1,863,225	2,543,302,125	36.9459	11.0929	0.0007326	1365
1366	1,865,956	2,548,895,896	36.9594	11.0956	0.0007321	1366
1367	1,868,689	2,554,497,863	36.9730	11.0983	0.0007315	1367
1368	1,871,424	2,560,108,032	36.9865	11.1010	0.0007310	1368
1369	1,874,161	2,565,726,409	37.0000	11.1037	0.0007305	1369
1370	1,876,900	2,571,353,000	37.0135	11.1064	0.0007299	1370
1371	1,879,641	2,576,987,811	37.0270	11.1091	0.0007294	1371
1372	1,882,384	2,582,630,848	37.0405	11.1118	0.0007289	1372
1373	1,885,129	2,588,282,117	37.0540	11.1145	0.0007283	1373
1374	1,887,876	2,593,941,624	37.0675	11.1172	0.0007278	1374
1375	1,890,625	2,599,609,375	37.0810	11.1199	0.0007273	1375
1376	1,893,376	2,605,285,376	37.0945	11.1226	0.0007267	1376
1377	1,896,129	2,610,969,633	37.1080	11.1253	0.0007262	1377
1378	1,898,884	2,616,662,152	37.1214	11.1280	0.0007257	1378
1379	1,901,641	2,622,362,939	37.1349	11.1307	0.0007252	1379
1380	1,904,400	2,628,072,000	37.1484	11.1334	0.0007246	1380
1381	1,907,161	2,633,789,341	37.1618	11.1361	0.0007241	1381
1382	1,909,924	2,639,514,968	37.1753	11.1387	0.0007236	1382
1383	1,912,689	2,645,248,887	37.1887	11.1414	0.0007231	1383
1384	1,915,456	2,650,991,104	37.2022	11.1441	0.0007225	1384
1385	1,918,225	2,656,741,625	37.2156	11.1468	0.0007220	1385
1386	1,920,996	2,662,500,456	37.2290	11.1495	0.0007215	1386
1387	1,923,769	2,668,267,603	37.2424	11.1522	0.0007210	1387
1388	1,926,544	2,674,043,072	37.2559	11.1548	0.0007205	1388
1389	1,929,321	2,679,826,869	37.2693	11.1575	0.0007199	1389
1390	1,932,100	2,685,619,000	37.2827	11.1602	0.0007194	1390
1391	1,934,881	2,691,419,471	37.2961	11.1629	0.0007189	1391
1392	1,937,664	2,697,228,288	37.3095	11.1655	0.0007184	1392
1393	1,940,449	2,703,045,457	37.3229	11.1682	0.0007179	1393
1394	1,943,236	2,708,870,984	37.3363	11.1709	0.0007174	1394
1395	1,946,025	2,714,704,875	37.3497	11.1736	0.0007168	1395
1396	1,948,816	2,720,547,136	37.3631	11.1762	0.0007163	1396
1397	1,951,609	2,726,397,773	37.3765	11.1789	0.0007158	1397
1398	1,954,404	2,732,256,792	37.3898	11.1816	0.0007153	1398
1399	1,957,201	2,738,124,199	37.4032	11.1842	0.0007148	1399
1400	1,960,000	2,744,000,000	37.4166	11.1869	0.0007143	1400

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1401	1,962,801	2,749,884,201	37.4299	11.1896	0.0007138	1401
1402	1,965,604	2,755,776,808	37.4433	11.1922	0.0007133	1402
1403	1,968,409	2,761,677,827	37.4566	11.1949	0.0007128	1403
1404	1,971,216	2,767,587,264	37.4700	11.1975	0.0007123	1404
1405	1,974,025	2,773,505,125	37.4833	11.2002	0.0007117	1405
1406	1,976,836	2,779,431,416	37.4967	11.2028	0.0007112	1406
1407	1,979,649	2,785,366,143	37.5100	11.2055	0.0007107	1407
1408	1,982,464	2,791,309,312	37.5233	11.2082	0.0007102	1408
1409	1,985,281	2,797,260,929	37.5366	11.2108	0.0007097	1409
1410	1,988,100	2,803,221,000	37.5500	11.2135	0.0007092	1410
1411	1,990,921	2,809,189,531	37.5633	11.2161	0.0007087	1411
1412	1,993,744	2,815,166,528	37.5766	11.2188	0.0007082	1412
1413	1,996,569	2,821,151,997	37.5899	11.2214	0.0007077	1413
1414	1,999,396	2,827,145,944	37.6032	11.2241	0.0007072	1414
1415	2,002,225	2,833,148,375	37.6165	11.2267	0.0007067	1415
1416	2,005,056	2,839,159,296	37.6298	11.2293	0.0007062	1416
1417	2,007,889	2,845,178,713	37.6431	11.2320	0.0007057	1417
1418	2,010,724	2,851,206,632	37.6563	11.2346	0.0007052	1418
1419	2,013,561	2,857,243,059	37.6696	11.2373	0.0007047	1419
1420	2,016,400	2,863,288,000	37.6829	11.2399	0.0007042	1420
1421	2,019,241	2,869,341,461	37.6962	11.2425	0.0007037	1421
1422	2,022,084	2,875,403,448	37.7094	11.2452	0.0007032	1422
1423	2,024,929	2,881,473,967	37.7227	11.2478	0.0007027	1423
1424	2,027,776	2,887,553,024	37.7359	11.2504	0.0007022	1424
1425	2,030,625	2,893,640,625	37.7492	11.2531	0.0007018	1425
1426	2,033,476	2,899,736,776	37.7624	11.2557	0.0007013	1426
1427	2,036,329	2,905,841,483	37.7757	11.2583	0.0007008	1427
1428	2,039,184	2,911,954,752	37.7889	11.2610	0.0007003	1428
1429	2,042,041	2,918,076,589	37.8021	11.2636	0.0006998	1429
1430	2,044,900	2,924,207,000	37.8153	11.2662	0.0006993	1430
1431	2,047,761	2,930,345,991	37.8286	11.2689	0.0006988	1431
1432	2,050,624	2,936,493,568	37.8418	11.2715	0.0006983	1432
1433	2,053,489	2,942,649,737	37.8550	11.2741	0.0006978	1433
1434	2,056,356	2,948,814,504	37.8682	11.2767	0.0006974	1434
1435	2,059,225	2,954,987,875	37.8814	11.2793	0.0006969	1435
1436	2,062,096	2,961,169,856	37.8946	11.2820	0.0006964	1436
1437	2,064,969	2,967,360,453	37.9078	11.2846	0.0006959	1437
1438	2,067,844	2,973,559,672	37.9210	11.2872	0.0006954	1438
1439	2,070,721	2,979,767,519	37.9342	11.2898	0.0006949	1439
1440	2,073,600	2,985,984,000	37.9473	11.2924	0.0006944	1440
1441	2,076,481	2,992,209,121	37.9605	11.2950	0.0006940	1441
1442	2,079,364	2,998,442,888	37.9737	11.2977	0.0006935	1442
1443	2,082,249	3,004,685,307	37.9868	11.3003	0.0006930	1443
1444	2,085,136	3,010,936,384	38.0000	11.3029	0.0006925	1444
1445	2,088,025	3,017,196,125	38.0132	11.3055	0.0006920	1445
1446	2,090,916	3,023,464,536	38.0263	11.3081	0.0006916	1446
1447	2,093,809	3,029,741,623	38.0395	11.3107	0.0006911	1447
1448	2,096,704	3,036,027,392	38.0526	11.3133	0.0006906	1448
1449	2,099,601	3,042,321,849	38.0657	11.3159	0.0006901	1449
1450	2,102,500	3,048,625,000	38.0789	11.3185	0.0006897	1450

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1451	2,105,401	3,054,936,851	38.0920	11.3211	0.0006892	1451
1452	2,108,304	3,061,257,408	38.1051	11.3237	0.0006887	1452
1453	2,111,209	3,067,586,677	38.1182	11.3263	0.0006882	1453
1454	2,114,116	3,073,924,664	38.1314	11.3289	0.0006878	1454
1455	2,117,025	3,080,271,375	38.1445	11.3315	0.0006873	1455
1456	2,119,936	3,086,626,816	38.1576	11.3341	0.0006868	1456
1457	2,122,849	3,092,990,993	38.1707	11.3367	0.0006863	1457
1458	2,125,764	3,099,363,912	38.1838	11.3393	0.0006859	1458
1459	2,128,681	3,105,745,579	38.1969	11.3419	0.0006854	1459
1460	2,131,600	3,112,136,000	38.2099	11.3445	0.0006849	1460
1461	2,134,521	3,118,535,181	38.2230	11.3471	0.0006845	1461
1462	2,137,444	3,124,943,128	38.2361	11.3496	0.0006840	1462
1463	2,140,369	3,131,359,847	38.2492	11.3522	0.0006835	1463
1464	2,143,296	3,137,785,344	38.2623	11.3548	0.0006831	1464
1465	2,146,225	3,144,219,625	38.2753	11.3574	0.0006826	1465
1466	2,149,156	3,150,662,696	38.2884	11.3600	0.0006821	1466
1467	2,152,089	3,157,114,563	38.3014	11.3626	0.0006817	1467
1468	2,155,024	3,163,575,232	38.3145	11.3652	0.0006812	1468
1469	2,157,961	3,170,044,709	38.3275	11.3677	0.0006807	1469
1470	2,160,900	3,176,523,000	38.3406	11.3703	0.0006803	1470
1471	2,163,841	3,183,010,111	38.3536	11.3729	0.0006798	1471
1472	2,166,784	3,189,506,048	38.3667	11.3755	0.0006793	1472
1473	2,169,729	3,196,010,817	38.3797	11.3780	0.0006789	1473
1474	2,172,676	3,202,524,424	38.3927	11.3806	0.0006784	1474
1475	2,175,625	3,209,046,875	38.4057	11.3832	0.0006780	1475
1476	2,178,576	3,215,578,176	38.4187	11.3858	0.0006775	1476
1477	2,181,529	3,222,118,333	38.4318	11.3883	0.0006770	1477
1478	2,184,484	3,228,667,352	38.4448	11.3909	0.0006766	1478
1479	2,187,441	3,235,225,239	38.4578	11.3935	0.0006761	1479
1480	2,190,400	3,241,792,000	38.4708	11.3960	0.0006757	1480
1481	2,193,361	3,248,367,641	38.4838	11.3986	0.0006752	1481
1482	2,196,324	3,254,952,168	38.4968	11.4012	0.0006748	1482
1483	2,199,289	3,261,545,587	38.5097	11.4037	0.0006743	1483
1484	2,202,256	3,268,147,904	38.5227	11.4063	0.0006739	1484
1485	2,205,225	3,274,759,125	38.5357	11.4089	0.0006734	1485
1486	2,208,196	3,281,379,256	38.5487	11.4114	0.0006729	1486
1487	2,211,169	3,288,008,303	38.5616	11.4140	0.0006725	1487
1488	2,214,144	3,294,646,272	38.5746	11.4165	0.0006720	1488
1489	2,217,121	3,301,293,169	38.5876	11.4191	0.0006716	1489
1490	2,220,100	3,307,949,000	38.6005	11.4216	0.0006711	1490
1491	2,223,081	3,314,613,771	38.6135	11.4242	0.0006707	1491
1492	2,226,064	3,321,287,488	38.6264	11.4268	0.0006702	1492
1493	2,229,049	3,327,970,157	38.6394	11.4293	0.0006698	1493
1494	2,232,036	3,334,661,784	38.6523	11.4319	0.0006693	1494
1495	2,235,025	3,341,362,375	38.6652	11.4344	0.0006689	1495
1496	2,238,016	3,348,071,936	38.6782	11.4370	0.0006684	1496
1497	2,241,009	3,354,790,473	38.6911	11.4395	0.0006680	1497
1498	2,244,004	3,361,517,992	38.7040	11.4421	0.0006676	1498
1499	2,247,001	3,368,254,499	38.7169	11.4446	0.0006671	1499
1500	2,250,000	3,375,000,000	38.7298	11.4471	0.0006667	1500



## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1501	2,253,001	3,381,754,501	38.7427	11.4497	0.0006662	1501
1502	2,256,004	3,388,518,008	38.7556	11.4522	0.0006658	1502
1503	2,259,009	3,395,290,527	38.7685	11.4548	0.0006653	1503
1504	2,262,016	3,402,072,064	38.7814	11.4573	0.0006649	1504
1505	2,265,025	3,408,862,625	38.7943	11.4598	0.0006645	1505
1506	2,268,036	3,415,662,216	38.8072	11.4624	0.0006640	1506
1507	2,271,049	3,422,470,843	38.8201	11.4649	0.0006636	1507
1508	2,274,064	3,429,288,512	38.8330	11.4675	0.0006631	1508
1509	2,277,081	3,436,115,229	38.8458	11.4700	0.0006627	1509
1510	2,280,100	3,442,951,000	38.8587	11.4725	0.0006623	1510
1511	2,283,121	3,449,795,831	38.8716	11.4751	0.0006618	1511
1512	2,286,144	3,456,649,728	38.8844	11.4776	0.0006614	1512
1513	2,289,169	3,463,512,697	38.8973	11.4801	0.0006609	1513
1514	2,292,196	3,470,384,744	38.9102	11.4826	0.0006605	1514
1515	2,295,225	3,477,265,875	38.9230	11.4852	0.0006601	1515
1516	2,298,256	3,484,156,096	38.9358	11.4877	0.0006596	1516
1517	2,301,289	3,491,055,413	38.9487	11.4902	0.0006592	1517
1518	2,304,324	3,497,963,832	38.9615	11.4927	0.0006588	1518
1519	2,307,361	3,504,881,359	38.9744	11.4953	0.0006583	1519
1520	2,310,400	3,511,808,000	38.9872	11.4978	0.0006579	1520
1521	2,313,441	3,518,743,761	39.0000	11.5003	0.0006575	1521
1522	2,316,484	3,525,688,648	39.0128	11.5028	0.0006570	1522
1523	2,319,529	3,532,642,667	39.0256	11.5054	0.0006566	1523
1524	2,322,576	3,539,605,824	39.0384	11.5079	0.0006562	1524
1525	2,325,625	3,546,578,125	39.0512	11.5104	0.0006557	1525
1526	2,328,676	3,553,559,576	39.0640	11.5129	0.0006553	1526
1527	2,331,729	3,560,550,183	39.0768	11.5154	0.0006549	1527
1528	2,334,784	3,567,549,952	39.0896	11.5179	0.0006545	1528
1529	2,337,841	3,574,558,889	39.1024	11.5204	0.0006540	1529
1530	2,340,900	3,581,577,000	39.1152	11.5230	0.0006536	1530
1531	2,343,961	3,588,604,291	39.1280	11.5255	0.0006532	1531
1532	2,347,024	3,595,640,768	39.1408	11.5280	0.0006527	1532
1533	2,350,089	3,602,686,437	39.1535	11.5305	0.0006523	1533
1534	2,353,156	3,609,741,304	39.1663	11.5330	0.0006519	1534
1535	2,356,225	3,616,805,375	39.1791	11.5355	0.0006515	1535
1536	2,359,296	3,623,878,656	39.1918	11.5380	0.0006510	1536
1537	2,362,369	3,630,961,153	39.2046	11.5405	0.0006506	1537
1538	2,365,444	3,638,052,872	39.2173	11.5430	0.0006502	1538
1539	2,368,521	3,645,153,819	39.2301	11.5455	0.0006498	1539
1540	2,371,600	3,652,264,000	39.2428	11.5480	0.0006494	1540
1541	2,374,681	3,659,383,421	39.2556	11.5505	0.0006489	1541
1542	2,377,764	3,666,512,088	39.2683	11.5530	0.0006485	1542
1543	2,380,849	3,673,650,007	39.2810	11.5555	0.0006481	1543
1544	2,383,936	3,680,797,184	39.2938	11.5580	0.0006477	1544
1545	2,387,025	3,687,953,625	39.3065	11.5605	0.0006472	1545
1546	2,390,116	3,695,119,336	39.3192	11.5630	0.0006468	1546
1547	2,393,209	3,702,294,323	39.3319	11.5655	0.0006464	1547
1548	2,396,304	3,709,478,592	39.3446	11.5680	0.0006460	1548
1549	2,399,401	3,716,672,149	39.3573	11.5705	0.0006456	1549
1550	2,402,500	3,723,875,000	39.3700	11.5729	0.0006452	1550



Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1551	2,405,601	3,731,087,151	39.3827	11.5754	0.0006447	1551
1552	2,408,704	3,738,308,608	39.3954	11.5779	0.0006443	1552
1553	2,411,809	3,745,539,377	39.4081	11.5804	0.0006439	1553
1554	2,414,916	3,752,779,464	39.4208	11.5829	0.0006435	1554
1555	2,418,025	3,760,028,875	39.4335	11.5854	0.0006431	1555
1556	2,421,136	3,767,287,616	39.4462	11.5879	0.0006427	1556
1557	2,424,249	3,774,555,693	39.4588	11.5903	0.0006423	1557
1558	2,427,364	3,781,833,112	39.4715	11.5928	0.0006418	1558
1559	2,430,481	3,789,119,879	39.4842	11.5953	0.0006414	1559
1560	2,433,600	3,796,416,000	39.4968	11.5978	0.0006410	1560
1561	2,436,721	3,803,721,481	39.5095	11.6003	0.0006406	1561
1562	2,439,844	3,811,036,328	39.5221	11.6027	0.0006402	1562
1563	2,442,969	3,818,360,547	39.5348	11.6052	0.0006398	1563
1564	2,446,096	3,825,694,144	39.5474	11.6077	0.0006394	1564
1565	2,449,225	3,833,037,125	39.5601	11.6102	0.0006390	1565
1566	2,452,356	3,840,389,496	39.5727	11.6126	0.0006386	1566
1567	2,455,489	3,847,751,263	39.5854	11.6151	0.0006382	1567
1568	2,458,624	3,855,123,432	39.5980	11.6176	0.0006378	1568
1569	2,461,761	3,862,503,009	39.6106	11.6200	0.0006373	1569
1570	2,464,900	3,869,893,000	39.6232	11.6225	0.0006369	1570
1571	2,468,041	3,877,292,411	39.6358	11.6250	0.0006365	1571
1572	2,471,184	3,884,701,248	39.6485	11.6274	0.0006361	1572
1573	2,474,329	3,892,119,517	39.6611	11.6299	0.0006357	1573
1574	2,477,476	3,899,547,224	39.6737	11.6324	0.0006353	1574
1575	2,480,625	3,906,984,375	39.6863	11.6348	0.0006349	1575
1576	2,483,776	3,914,430,976	39.6989	11.6373	0.0006345	1576
1577	2,486,929	3,921,887,033	39.7115	11.6398	0.0006341	1577
1578	2,490,084	3,929,352,552	39.7240	11.6422	0.0006337	1578
1579	2,493,241	3,936,827,539	39.7366	11.6447	0.0006333	1579
1580	2,496,400	3,944,312,000	39.7492	11.6471	0.0006329	1580
1581	2,499,561	3,951,805,941	39.7618	11.6496	0.0006325	1581
1582	2,502,724	3,959,309,368	39.7744	11.6520	0.0006321	1582
1583	2,505,889	3,966,822,287	39.7869	11.6545	0.0006317	1583
1584	2,509,056	3,974,344,704	39.7995	11.6570	0.0006313	1584
1585	2,512,225	3,981,876,625	39.8121	11.6594	0.0006309	1585
1586	2,515,396	3,989,418,056	39.8246	11.6619	0.0006305	1586
1587	2,518,569	3,996,969,003	39.8372	11.6643	0.0006301	1587
1588	2,521,744	4,004,529,472	39.8497	11.6668	0.0006297	1588
1589	2,524,921	4,012,099,469	39.8623	11.6692	0.0006293	1589
1590	2,528,100	4,019,679,000	39.8748	11.6717	0.0006289	1590
1591	2,531,281	4,027,268,071	39.8873	11.6741	0.0006285	1591
1592	2,534,464	4,034,866,688	39.8999	11.6765	0.0006281	1592
1593	2,537,649	4,042,474,857	39.9124	11.6790	0.0006277	1593
1594	2,540,836	4,050,092,584	39.9249	11.6814	0.0006274	1594
1595	2,544,025	4,057,719,875	39.9375	11.6839	0.0006270	1595
1596	2,547,216	4,065,356,736	39.9500	11.6863	0.0006266	1596
1597	2,550,409	4,073,003,173	39.9625	11.6887	0.0006262	1597
1598	2,553,604	4,080,659,192	39.9750	11.6912	0.0006258	1598
1599	2,556,801	4,088,324,799	39.9875	11.6936	0.0006254	1599
1600	2,560,000	4,096,000,000	40.0000	11.6961	0.0006250	1600

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1601	2,563,201	4,103,684,801	40.0125	11.6985	0.0006246	1601
1602	2,566,404	4,111,379,208	40.0250	11.7009	0.0006242	1602
1603	2,569,609	4,119,083,227	40.0375	11.7034	0.0006238	1603
1604	2,572,816	4,126,796,864	40.0500	11.7058	0.0006234	1604
1605	2,576,025	4,134,520,125	40.0625	11.7082	0.0006231	1605
1606	2,579,236	4,142,253,016	40.0749	11.7107	0.0006227	1606
1607	2,582,449	4,149,995,543	40.0874	11.7131	0.0006223	1607
1608	2,585,664	4,157,747,712	40.0999	11.7155	0.0006219	1608
1609	2,588,881	4,165,509,529	40.1123	11.7180	0.0006215	1609
1610	2,592,100	4,173,281,000	40.1248	11.7204	0.0006211	1610
1611	2,595,321	4,181,062,131	40.1373	11.7228	0.0006207	1611
1612	2,598,544	4,188,852,928	40.1497	11.7252	0.0006203	1612
1613	2,601,769	4,196,653,397	40.1622	11.7277	0.0006200	1613
1614	2,604,996	4,204,463,544	40.1746	11.7301	0.0006196	1614
1615	2,608,225	4,212,283,375	40.1871	11.7325	0.0006192	1615
1616	2,611,456	4,220,112,896	40.1995	11.7349	0.0006188	1616
1617	2,614,689	4,227,952,113	40.2119	11.7373	0.0006184	1617
1618	2,617,924	4,235,801,032	40.2244	11.7398	0.0006180	1618
1619	2,621,161	4,243,659,659	40.2368	11.7422	0.0006177	1619
1620	2,624,400	4,251,528,000	40.2492	11.7446	0.0006173	1620
1621	2,627,641	4,259,406,061	40.2616	11.7470	0.0006169	1621
1622	2,630,884	4,267,293,848	40.2741	11.7494	0.0006165	1622
1623	2,634,129	4,275,191,367	40.2865	11.7518	0.0006161	1623
1624	2,637,376	4,283,098,624	40.2989	11.7543	0.0006158	1624
1625	2,640,625	4,291,015,625	40.3113	11.7567	0.0006154	1625
1626	2,643,876	4,298,942,376	40.3237	11.7591	0.0006150	1626
1627	2,647,129	4,306,878,883	40.3361	11.7615	0.0006146	1627
1628	2,650,384	4,314,825,152	40.3485	11.7639	0.0006143	1628
1629	2,653,641	4,322,781,189	40.3609	11.7663	0.0006139	1629
1630	2,656,900	4,330,747,000	40.3733	11.7687	0.0006135	1630
1631	2,660,161	4,338,722,591	40.3856	11.7711	0.0006131	1631
1632	2,663,424	4,346,707,968	40.3980	11.7735	0.0006127	1632
1633	2,666,689	4,354,703,137	40.4104	11.7759	0.0006124	1633
1634	2,669,956	4,362,708,104	40.4228	11.7783	0.0006120	1634
1635	2,673,225	4,370,722,875	40.4351	11.7807	0.0006116	1635
1636	2,676,496	4,378,747,456	40.4475	11.7831	0.0006112	1636
1637	2,679,769	4,386,781,853	40.4599	11.7855	0.0006109	1637
1638	2,683,044	4,394,826,072	40.4722	11.7879	0.0006105	1638
1639	2,686,321	4,402,880,119	40.4846	11.7903	0.0006101	1639
1640	2,689,600	4,410,944,000	40.4969	11.7927	0.0006098	1640
1641	2,692,881	4,419,017,721	40.5093	11.7951	0.0006094	1641
1642	2,696,164	4,427,101,288	40.5216	11.7975	0.0006090	1642
1643	2,699,449	4,435,194,707	40.5339	11.7999	0.0006086	1643
1644	2,702,736	4,443,297,984	40.5463	11.8023	0.0006083	1644
1645	2,706,025	4,451,411,125	40.5586	11.8047	0.0006079	1645
1646	2,709,316	4,459,534,136	40.5709	11.8071	0.0006075	1646
1647	2,712,609	4,467,667,023	40.5832	11.8095	0.0006072	1647
1648	2,715,904	4,475,809,792	40.5956	11.8119	0.0006068	1648
1649	2,719,201	4,483,962,449	40.6079	11.8143	0.0006064	1649
1650	2,722,500	4,492,125,000	40.6202	11.8167	0.0006061	1650

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1651	2,725,801	4,500,297,451	40.6325	11.8190	0.0006057	1651
1652	2,729,104	4,508,479,808	40.6448	11.8214	0.0006053	1652
1653	2,732,409	4,516,672,077	40.6571	11.8238	0.0006050	1653
1654	2,735,716	4,524,874,264	40.6694	11.8262	0.0006046	1654
1655	2,739,025	4,533,086,375	40.6817	11.8286	0.0006042	1655
1656	2,742,336	4,541,308,416	40.6940	11.8310	0.0006039	1656
1657	2,745,649	4,549,540,393	40.7063	11.8333	0.0006035	1657
1658	2,748,964	4,557,782,312	40.7185	11.8357	0.0006031	1658
1659	2,752,281	4,566,034,179	40.7308	11.8381	0.0006028	1659
1660	2,755,600	4,574,296,000	40.7431	11.8405	0.0006024	1660
1661	2,758,921	4,582,567,781	40.7554	11.8429	0.0006020	1661
1662	2,762,244	4,590,849,528	40.7676	11.8452	0.0006017	1662
1663	2,765,569	4,599,141,247	40.7799	11.8476	0.0006013	1663
1664	2,768,896	4,607,442,944	40.7922	11.8500	0.0006010	1664
1665	2,772,225	4,615,754,625	40.8044	11.8524	0.0006006	1665
1666	2,775,556	4,624,076,296	40.8167	11.8547	0.0006002	1666
1667	2,778,889	4,632,407,963	40.8289	11.8571	0.0005999	1667
1668	2,782,224	4,640,749,632	40.8412	11.8595	0.0005995	1668
1669	2,785,561	4,649,101,309	40.8534	11.8618	0.0005992	1669
1670	2,788,900	4,657,463,000	40.8656	11.8642	0.0005988	1670
1671	2,792,241	4,665,834,711	40.8779	11.8666	0.0005984	1671
1672	2,795,584	4,674,216,448	40.8901	11.8689	0.0005981	1672
1673	2,798,929	4,682,608,217	40.9023	11.8713	0.0005977	1673
1674	2,802,276	4,691,010,024	40.9145	11.8737	0.0005974	1674
1675	2,805,625	4,699,421,875	40.9268	11.8760	0.0005970	1675
1676	2,808,976	4,707,843,776	40.9390	11.8784	0.0005967	1676
1677	2,812,329	4,716,275,733	40.9512	11.8808	0.0005963	1677
1678	2,815,684	4,724,717,752	40.9634	11.8831	0.0005959	1678
1679	2,819,041	4,733,169,839	40.9756	11.8855	0.0005956	1679
1680	2,822,400	4,741,632,000	40.9878	11.8878	0.0005952	1680
1681	2,825,761	4,750,104,241	41.0000	11.8902	0.0005949	1681
1682	2,829,124	4,758,586,568	41.0122	11.8926	0.0005945	1682
1683	2,832,489	4,767,078,987	41.0244	11.8949	0.0005942	1683
1684	2,835,856	4,775,581,504	41.0366	11.8973	0.0005938	1684
1685	2,839,225	4,784,094,125	41.0487	11.8996	0.0005935	1685
1686	2,842,596	4,792,616,856	41.0609	11.9020	0.0005931	1686
1687	2,845,969	4,801,149,703	41.0731	11.9043	0.0005928	1687
1688	2,849,344	4,809,692,672	41.0853	11.9067	0.0005924	1688
1689	2,852,721	4,818,245,769	41.0974	11.9090	0.0005921	1689
1690	2,856,100	4,826,809,000	41.1096	11.9114	0.0005917	1690
1691	2,859,481	4,835,382,371	41.1218	11.9137	0.0005914	1691
1692	2,862,864	4,843,965,888	41.1339	11.9161	0.0005910	1692
1693	2,866,249	4,852,559,557	41.1461	11.9184	0.0005907	1693
1694	2,869,636	4,861,163,384	41.1582	11.9208	0.0005903	1694
1695	2,873,025	4,869,777,375	41.1704	11.9231	0.0005900	1695
1696	2,876,416	4,878,401,536	41.1825	11.9255	0.0005896	1696
1697	2,879,809	4,887,035,873	41.1947	11.9278	0.0005893	1697
1698	2,883,204	4,895,680,392	41.2068	11.9301	0.0005889	1698
1699	2,886,601	4,904,335,099	41.2189	11.9325	0.0005886	1699
1700	2,890,000	4,913,000,000	41.2311	11.9348	0.0005882	1700

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1701	2,893,401	4,921,675,101	41.2432	11.9372	0.0005879	1701
1702	2,896,804	4,930,360,408	41.2553	11.9395	0.0005875	1702
1703	2,900,209	4,939,055,927	41.2674	11.9418	0.0005872	1703
1704	2,903,616	4,947,761,664	41.2795	11.9442	0.0005869	1704
1705	2,907,025	4,956,477,625	41.2916	11.9465	0.0005865	1705
1706	2,910,436	4,965,203,816	41.3038	11.9489	0.0005862	1706
1707	2,913,849	4,973,940,243	41.3159	11.9512	0.0005858	1707
1708	2,917,264	4,982,686,912	41.3280	11.9535	0.0005855	1708
1709	2,920,681	4,991,443,829	41.3401	11.9559	0.0005851	1709
1710	2,924,100	5,000,211,000	41.3521	11.9582	0.0005848	1710
1711	2,927,521	5,008,988,431	41.3642	11.9605	0.0005845	1711
1712	2,930,944	5,017,776,128	41.3763	11.9628	0.0005841	1712
1713	2,934,369	5,026,574,097	41.3884	11.9652	0.0005838	1713
1714	2,937,796	5,035,382,344	41.4005	11.9675	0.0005834	1714
1715	2,941,225	5,044,200,875	41.4126	11.9698	0.0005831	1715
1716	2,944,656	5,053,029,696	41.4246	11.9722	0.0005828	1716
1717	2,948,089	5,061,868,813	41.4367	11.9745	0.0005824	1717
1718	2,951,524	5,070,718,232	41.4488	11.9768	0.0005821	1718
1719	2,954,961	5,079,577,959	41.4608	11.9791	0.0005817	1719
1720	2,958,400	5,088,448,000	41.4729	11.9815	0.0005814	1720
1721	2,961,841	5,097,328,361	41.4849	11.9838	0.0005811	1721
1722	2,965,284	5,106,219,048	41.4970	11.9861	0.0005807	1722
1723	2,968,729	5,115,120,067	41.5090	11.9884	0.0005804	1723
1724	2,972,176	5,124,031,424	41.5211	11.9907	0.0005800	1724
1725	2,975,625	5,132,953,125	41.5331	11.9931	0.0005797	1725
1726	2,979,076	5,141,885,176	41.5452	11.9954	0.0005794	1726
1727	2,982,529	5,150,827,583	41.5572	11.9977	0.0005790	1727
1728	2,985,984	5,159,780,352	41.5692	12.0000	0.0005787	1728
1729	2,989,441	5,168,743,489	41.5812	12.0023	0.0005784	1729
1730	2,992,900	5,177,717,000	41.5933	12.0046	0.0005780	1730
1731	2,996,361	5,186,700,891	41.6053	12.0069	0.0005777	1731
1732	2,999,824	5,195,695,168	41.6173	12.0093	0.0005774	1732
1733	3,003,289	5,204,699,837	41.6293	12.0116	0.0005770	1733
1734	3,006,756	5,213,714,904	41.6413	12.0139	0.0005767	1734
1735	3,010,225	5,222,740,375	41.6533	12.0162	0.0005764	1735
1736	3,013,696	5,231,776,256	41.6653	12.0185	0.0005760	1736
1737	3,017,169	5,240,822,553	41.6773	12.0208	0.0005757	1737
1738	3,020,644	5,249,879,272	41.6893	12.0231	0.0005754	1738
1739	3,024,121	5,258,946,419	41.7013	12.0254	0.0005750	1739
1740	3,027,600	5,268,024,000	41.7133	12.0277	0.0005747	1740
1741	3,031,081	5,277,112,021	41.7253	12.0300	0.0005744	1741
1742	3,034,564	5,286,210,488	41.7373	12.0323	0.0005741	1742
1743	3,038,049	5,295,319,407	41.7493	12.0346	0.0005737	1743
1744	3,041,536	5,304,438,784	41.7612	12.0369	0.0005734	1744
1745	3,045,025	5,313,568,625	41.7732	12.0392	0.0005731	1745
1746	3,048,516	5,322,708,936	41.7852	12.0415	0.0005727	1746
1747	3,052,009	5,331,859,723	41.7971	12.0438	0.0005724	1747
1748	3,055,504	5,341,020,992	41.8091	12.0461	0.0005721	1748
1749	3,059,001	5,350,192,749	41.8210	12.0484	0.0005718	1749
1750	3,062,500	5,359,375,000	41.8330	12.0507	0.0005714	1750

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1751	3,066,001	5,368,567,751	41.8450	12.0530	0.0005711	1751
1752	3,069,504	5,377,771,008	41.8569	12.0553	0.0005708	1752
1753	3,073,009	5,386,984,777	41.8688	12.0576	0.0005705	1753
1754	3,076,516	5,396,209,064	41.8808	12.0599	0.0005701	1754
1755	3,080,025	5,405,443,875	41.8927	12.0622	0.0005698	1755
1756	3,083,536	5,414,689,216	41.9047	12.0645	0.0005695	1756
1757	3,087,049	5,423,945,093	41.9166	12.0668	0.0005692	1757
1758	3,090,564	5,433,211,512	41.9285	12.0690	0.0005688	1758
1759	3,094,081	5,442,488,479	41.9404	12.0713	0.0005685	1759
1760	3,097,600	5,451,776,000	41.9524	12.0736	0.0005682	1760
1761	3,101,121	5,461,074,081	41.9643	12.0759	0.0005679	1761
1762	3,104,644	5,470,382,728	41.9762	12.0782	0.0005675	1762
1763	3,108,169	5,479,701,947	41.9881	12.0805	0.0005672	1763
1764	3,111,696	5,489,031,744	42.0000	12.0828	0.0005669	1764
1765	3,115,225	5,498,372,125	42.0119	12.0850	0.0005666	1765
1766	3,118,756	5,507,723,096	42.0238	12.0873	0.0005663	1766
1767	3,122,289	5,517,084,663	42.0357	12.0896	0.0005659	1767
1768	3,125,824	5,526,456,832	42.0476	12.0919	0.0005656	1768
1769	3,129,361	5,535,839,609	42.0595	12.0942	0.0005653	1769
1770	3,132,900	5,545,233,000	42.0714	12.0964	0.0005650	1770
1771	3,136,441	5,554,637,011	42.0833	12.0987	0.0005647	1771
1772	3,139,984	5,564,051,648	42.0951	12.1010	0.0005643	1772
1773	3,143,529	5,573,476,917	42.1070	12.1033	0.0005640	1773
1774	3,147,076	5,582,912,824	42.1189	12.1056	0.0005637	1774
1775	3,150,625	5,592,359,375	42.1307	12.1078	0.0005634	1775
1776	3,154,176	5,601,816,576	42.1426	12.1101	0.0005631	1776
1777	3,157,729	5,611,284,433	42.1545	12.1124	0.0005627	1777
1778	3,161,284	5,620,762,952	42.1663	12.1146	0.0005624	1778
1779	3,164,841	5,630,252,139	42.1782	12.1169	0.0005621	1779
1780	3,268,400	5,639,752,000	42.1900	12.1192	0.0005618	1780
1781	3,171,961	5,649,262,541	42.2019	12.1215	0.0005615	1781
1782	3,175,524	5,658,783,768	42.2137	12.1237	0.0005612	1782
1783	3,179,089	5,668,315,687	42.2256	12.1260	0.0005609	1783
1784	3,182,656	5,677,858,304	42.2374	12.1283	0.0005605	1784
1785	3,186,225	5,687,411,625	42.2493	12.1305	0.0005602	1785
1786	3,189,796	5,696,975,656	42.2611	12.1328	0.0005599	1786
1787	3,193,369	5,706,550,403	42.2729	12.1350	0.0005596	1787
1788	3,196,944	5,716,135,872	42.2847	12.1373	0.0005593	1788
1789	3,200,521	5,725,732,069	42.2966	12.1396	0.0005590	1789
1790	3,204,100	5,735,339,000	42.3084	12.1418	0.0005587	1790
1791	3,207,681	5,744,956,671	42.3202	12.1441	0.0005583	1791
1792	3,211,264	5,754,585,088	42.3320	12.1464	0.0005580	1792
1793	3,214,849	5,764,224,257	42.3438	12.1486	0.0005577	1793
1794	3,218,436	5,773,874,184	42.3556	12.1509	0.0005574	1794
1795	3,222,025	5,783,534,875	42.3674	12.1531	0.0005571	1795
1796	3,225,616	5,793,206,336	42.3792	12.1554	0.0005568	1796
1797	3,229,209	5,802,888,573	42.3910	12.1576	0.0005565	1797
1798	3,232,804	5,812,581,592	42.4028	12.1599	0.0005562	1798
1799	3,236,401	5,822,285,399	42.4146	12.1622	0.0005559	1799
1800	3,240,000	5,832,000,000	42.4264	12.1644	0.0005556	1800



## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1801	3,243,601	5,841,725,401	42.4382	12.1657	0.0005552	1801
1802	3,247,204	5,851,461,608	42.4500	12.1689	0.0005549	1802
1803	3,250,809	5,861,203,627	42.4617	12.1712	0.0005546	1803
1804	3,254,416	5,870,966,464	42.4735	12.1734	0.0005543	1804
1805	3,258,025	5,880,735,125	42.4853	12.1757	0.0005540	1805
1806	3,261,636	5,890,514,616	42.4971	12.1779	0.0005537	1806
1807	3,265,249	5,900,304,943	42.5088	12.1802	0.0005534	1807
1808	3,268,864	5,910,106,112	42.5206	12.1824	0.0005531	1808
1809	3,272,481	5,919,918,129	42.5323	12.1846	0.0005528	1809
1810	3,276,100	5,929,741,000	42.5441	12.1869	0.0005525	1810
1811	3,279,721	5,939,574,731	42.5558	12.1891	0.0005522	1811
1812	3,283,344	5,949,419,328	42.5676	12.1914	0.0005519	1812
1813	3,286,969	5,959,274,797	42.5793	12.1936	0.0005516	1813
1814	3,290,596	5,969,141,144	42.5911	12.1959	0.0005513	1814
1815	3,294,225	5,979,018,375	42.6028	12.1981	0.0005510	1815
1816	3,297,856	5,988,906,496	42.6146	12.2003	0.0005507	1816
1817	3,301,489	5,998,805,513	42.6263	12.2026	0.0005504	1817
1818	3,305,124	6,008,715,432	42.6380	12.2048	0.0005501	1818
1819	3,308,761	6,018,636,259	42.6497	12.2071	0.0005498	1819
1820	3,312,400	6,028,568,000	42.6615	12.2093	0.0005495	1820
1821	3,316,041	6,038,510,661	42.6732	12.2115	0.0005491	1821
1822	3,319,684	6,048,464,248	42.6849	12.2138	0.0005488	1822
1823	3,323,329	6,058,428,767	42.6966	12.2160	0.0005485	1823
1824	3,326,976	6,068,404,224	42.7083	12.2182	0.0005482	1824
1825	3,330,625	6,078,390,625	42.7200	12.2205	0.0005479	1825
1826	3,334,276	6,088,387,976	42.7317	12.2227	0.0005476	1826
1827	3,337,929	6,098,396,283	42.7434	12.2249	0.0005473	1827
1828	3,341,584	6,108,415,552	42.7551	12.2272	0.0005470	1828
1829	3,345,241	6,118,445,789	42.7668	12.2294	0.0005467	1829
1830	3,348,900	6,128,487,000	42.7785	12.2316	0.0005464	1830
1831	3,352,561	6,138,539,191	42.7902	12.2338	0.0005461	1831
1832	3,356,224	6,148,602,368	42.8019	12.2361	0.0005459	1832
1833	3,359,889	6,158,676,537	42.8135	12.2383	0.0005456	1833
1834	3,363,556	6,168,761,704	42.8252	12.2405	0.0005453	1834
1835	3,367,225	6,178,857,875	42.8369	12.2427	0.0005450	1835
1836	3,370,896	6,188,965,056	42.8486	12.2450	0.0005447	1836
1837	3,374,569	6,199,083,253	42.8602	12.2472	0.0005444	1837
1838	3,378,244	6,209,212,472	42.8719	12.2494	0.0005441	1838
1839	3,381,921	6,219,352,719	42.8836	12.2516	0.0005438	1839
1840	3,385,600	6,229,504,000	42.8952	12.2539	0.0005435	1840
1841	3,389,281	6,239,666,321	42.9069	12.2561	0.0005432	1841
1842	3,392,964	6,249,839,688	42.9185	12.2583	0.0005429	1842
1843	3,396,649	6,260,024,107	42.9302	12.2605	0.0005426	1843
1844	3,400,336	6,270,219,584	42.9418	12.2627	0.0005423	1844
1845	3,404,025	6,280,426,125	42.9535	12.2649	0.0005420	1845
1846	3,407,716	6,290,643,736	42.9651	12.2672	0.0005417	1846
1847	3,411,409	6,300,872,423	42.9767	12.2694	0.0005414	1847
1848	3,415,104	6,311,112,192	42.9884	12.2716	0.0005411	1848
1849	3,418,801	6,321,363,049	43.0000	12.2738	0.0005408	1849
1850	3,422,500	6,331,625,000	43.0116	12.2760	0.0005405	1850



Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1851	3,426,201	6,341,898,051	43.0232	12.2782	0.0005402	1851
1852	3,429,904	6,352,182,208	43.0349	12.2804	0.0005400	1852
1853	3,433,609	6,362,477,477	43.0465	12.2826	0.0005397	1853
1854	3,437,316	6,372,783,864	43.0581	12.2849	0.0005394	1854
1855	3,441,025	6,383,101,375	43.0697	12.2871	0.0005391	1855
1856	3,444,736	6,393,430,016	43.0813	12.2893	0.0005388	1856
1857	3,448,449	6,403,769,793	43.0929	12.2915	0.0005385	1857
1858	3,452,164	6,414,120,712	43.1045	12.2937	0.0005382	1858
1859	3,455,881	6,424,482,779	43.1161	12.2959	0.0005379	1859
1860	3,459,600	6,434,856,000	43.1277	12.2981	0.0005376	1860
1861	3,463,321	6,445,240,381	43.1393	12.3003	0.0005373	1861
1862	3,467,044	6,455,635,928	43.1509	12.3025	0.0005371	1862
1863	3,470,769	6,466,042,647	43.1625	12.3047	0.0005368	1863
1864	3,474,496	6,476,460,544	43.1741	12.3069	0.0005365	1864
1865	3,478,225	6,486,889,625	43.1856	12.3091	0.0005362	1865
1866	3,481,956	6,497,329,896	43.1972	12.3113	0.0005359	1866
1867	3,485,689	6,507,781,363	43.2088	12.3135	0.0005356	1867
1868	3,489,424	6,518,244,032	43.2204	12.3157	0.0005353	1868
1869	3,493,161	6,528,717,909	43.2319	12.3179	0.0005350	1869
1870	3,496,900	6,539,203,000	43.2435	12.3201	0.0005348	1870
1871	3,500,641	6,549,699,311	43.2551	12.3223	0.0005345	1871
1872	3,504,384	6,560,206,848	43.2666	12.3245	0.0005342	1872
1873	3,508,129	6,570,725,617	43.2782	12.3267	0.0005339	1873
1874	3,511,876	6,581,255,624	43.2897	12.3289	0.0005336	1874
1875	3,515,625	6,591,796,875	43.3013	12.3311	0.0005333	1875
1876	3,519,376	6,602,349,376	43.3128	12.3333	0.0005330	1876
1877	3,523,129	6,612,913,133	43.3244	12.3354	0.0005328	1877
1878	3,526,884	6,623,488,152	43.3359	12.3376	0.0005325	1878
1879	3,530,641	6,634,074,439	43.3474	12.3398	0.0005322	1879
1880	3,534,400	6,644,672,000	43.3590	12.3420	0.0005319	1880
1881	3,538,161	6,655,280,841	43.3705	12.3442	0.0005316	1881
1882	3,541,924	6,665,900,968	43.3820	12.3464	0.0005313	1882
1883	3,545,689	6,676,532,387	43.3935	12.3486	0.0005311	1883
1884	3,549,456	6,687,175,104	43.4051	12.3508	0.0005308	1884
1885	3,553,225	6,697,829,125	43.4166	12.3529	0.0005305	1885
1886	3,556,996	6,708,494,456	43.4281	12.3551	0.0005302	1886
1887	3,560,769	6,719,171,103	43.4396	12.3573	0.0005299	1887
1888	3,564,544	6,729,859,072	43.4511	12.3595	0.0005297	1888
1889	3,568,321	6,740,558,369	43.4626	12.3617	0.0005294	1889
1890	3,572,100	6,751,269,000	43.4741	12.3639	0.0005291	1890
1891	3,575,881	6,761,990,971	43.4856	12.3660	0.0005288	1891
1892	3,579,664	6,772,724,288	43.4971	12.3682	0.0005285	1892
1893	3,583,449	6,783,468,957	43.5086	12.3704	0.0005283	1893
1894	3,587,236	6,794,224,984	43.5201	12.3726	0.0005280	1894
1895	3,591,025	6,804,992,375	43.5316	12.3747	0.0005277	1895
1896	3,594,816	6,815,771,136	43.5431	12.3769	0.0005274	1896
1897	3,598,609	6,826,561,273	43.5546	12.3791	0.0005271	1897
1898	3,602,404	6,837,362,792	43.5660	12.3813	0.0005269	1898
1899	3,606,201	6,848,175,699	43.5775	12.3835	0.0005266	1899
1900	3,610,000	6,859,000,000	43.5890	12.3856	0.0005263	1900

## Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1901	3,613,801	6,869,835,701	43.6005	12.5878	0.0005260	1901
1902	3,617,604	6,880,682,808	43.6119	12.3900	0.0005258	1902
1903	3,621,409	6,891,541,327	43.6234	12.3921	0.0005255	1903
1904	3,625,216	6,902,411,264	43.6348	12.3943	0.0005252	1904
1905	3,629,025	6,913,292,625	43.6463	12.3965	0.0005249	1905
1906	3,632,836	6,924,185,416	43.6578	12.3986	0.0005247	1906
1907	3,636,649	6,935,089,643	43.6692	12.4008	0.0005244	1907
1908	3,640,464	6,946,005,312	43.6807	12.4030	0.0005241	1908
1909	3,644,281	6,956,932,429	43.6921	12.4051	0.0005238	1909
1910	3,648,100	6,967,871,000	43.7035	12.4073	0.0005236	1910
1911	3,651,921	6,978,821,031	43.7150	12.4095	0.0005233	1911
1912	3,655,744	6,989,782,528	43.7264	12.4116	0.0005230	1912
1913	3,659,569	7,000,755,497	43.7379	12.4138	0.0005227	1913
1914	3,663,396	7,011,739,944	43.7493	12.4160	0.0005225	1914
1915	3,667,225	7,022,735,875	43.7607	12.4181	0.0005222	1915
1916	3,671,056	7,033,743,206	43.7721	12.4203	0.0005219	1916
1917	3,674,889	7,044,762,213	43.7836	12.4225	0.0005216	1917
1918	3,678,724	7,055,792,632	43.7950	12.4246	0.0005214	1918
1919	3,682,561	7,066,834,559	43.8064	12.4268	0.0005211	1919
1920	3,686,400	7,077,888,000	43.8178	12.4289	0.0005208	1920
1921	3,690,241	7,088,952,961	43.8292	12.4311	0.0005206	1921
1922	3,694,084	7,100,029,448	43.8406	12.4332	0.0005203	1922
1923	3,697,929	7,111,117,467	43.8520	12.4354	0.0005200	1923
1924	3,701,776	7,122,217,024	43.8634	12.4376	0.0005198	1924
1925	3,705,625	7,133,328,125	43.8748	12.4397	0.0005195	1925
1926	3,709,476	7,144,450,776	43.8862	12.4419	0.0005192	1926
1927	3,713,329	7,155,584,983	43.8976	12.4440	0.0005189	1927
1928	3,717,184	7,166,730,752	43.9090	12.4462	0.0005187	1928
1929	3,721,041	7,177,888,089	43.9204	12.4483	0.0005184	1929
1930	3,724,900	7,189,057,000	43.9318	12.4505	0.0005181	1930
1931	3,728,761	7,200,237,491	43.9431	12.4526	0.0005179	1931
1932	3,732,624	7,211,429,568	43.9545	12.4548	0.0005176	1932
1933	3,736,489	7,222,633,237	43.9659	12.4569	0.0005173	1933
1934	3,740,356	7,233,848,504	43.9773	12.4591	0.0005171	1934
1935	3,744,225	7,245,075,375	43.9886	12.4612	0.0005168	1935
1936	3,748,096	7,256,313,856	44.0000	12.4634	0.0005165	1936
1937	3,751,969	7,267,563,953	44.0114	12.4655	0.0005163	1937
1938	3,755,844	7,278,825,672	44.0227	12.4676	0.0005160	1938
1939	3,759,721	7,290,099,019	44.0341	12.4698	0.0005157	1939
1940	3,763,600	7,301,384,000	44.0454	12.4719	0.0005155	1940
1941	3,767,481	7,312,680,621	44.0568	12.4741	0.0005152	1941
1942	3,771,364	7,323,988,888	44.0681	12.4762	0.0005149	1942
1943	3,775,249	7,335,308,807	44.0795	12.4784	0.0005147	1943
1944	3,779,136	7,346,640,384	44.0908	12.4805	0.0005144	1944
1945	3,783,025	7,357,983,625	44.1022	12.4826	0.0005141	1945
1946	3,786,916	7,369,338,536	44.1135	12.4848	0.0005139	1946
1947	3,790,809	7,380,705,123	44.1248	12.4869	0.0005136	1947
1948	3,794,704	7,392,083,392	44.1362	12.4891	0.0005133	1948
1949	3,798,601	7,403,473,349	44.1475	12.4912	0.0005131	1949
1950	3,802,500	7,414,875,000	44.1588	12.4933	0.0005128	1950

Powers, Roots and Reciprocals

No.	Square	Cube	Sq. Root	Cube Root	Reciprocal	No.
1951	3,806,401	7,426,288,351	44.1701	12.4955	0.0005126	1951
1952	3,810,304	7,437,713,408	44.1814	12.4976	0.0005123	1952
1953	3,814,209	7,449,150,177	44.1928	12.4997	0.0005120	1953
1954	3,818,116	7,460,598,664	44.2041	12.5019	0.0005118	1954
1955	3,822,025	7,472,058,875	44.2154	12.5040	0.0005115	1955
1956	3,825,936	7,483,530,816	44.2267	12.5061	0.0005112	1956
1957	3,829,849	7,495,014,493	44.2380	12.5083	0.0005110	1957
1958	3,833,764	7,506,509,912	44.2493	12.5104	0.0005107	1958
1959	3,837,681	7,518,017,079	44.2606	12.5125	0.0005105	1959
1960	3,841,600	7,529,536,000	44.2719	12.5146	0.0005102	1960
1961	3,845,521	7,541,066,681	44.2832	12.5168	0.0005099	1961
1962	3,849,444	7,552,609,128	44.2945	12.5189	0.0005097	1962
1963	3,853,369	7,564,163,347	44.3058	12.5210	0.0005094	1963
1964	3,857,296	7,575,729,344	44.3170	12.5232	0.0005092	1964
1965	3,861,225	7,587,307,125	44.3283	12.5253	0.0005089	1965
1966	3,865,156	7,598,896,696	44.3396	12.5274	0.0005086	1966
1967	3,869,089	7,610,498,063	44.3509	12.5295	0.0005084	1967
1968	3,873,024	7,622,111,232	44.3621	12.5317	0.0005081	1968
1969	3,876,961	7,633,736,209	44.3734	12.5338	0.0005079	1969
1970	3,880,900	7,645,373,000	44.3847	12.5359	0.0005076	1970
1971	3,884,841	7,657,021,611	44.3959	12.5380	0.0005074	1971
1972	3,888,784	7,668,682,048	44.4072	12.5401	0.0005071	1972
1973	3,892,729	7,680,353,317	44.4185	12.5423	0.0005068	1973
1974	3,896,676	7,692,038,424	44.4297	12.5444	0.0005066	1974
1975	3,900,625	7,703,734,375	44.4410	12.5465	0.0005063	1975
1976	3,904,576	7,715,442,176	44.4522	12.5486	0.0005061	1976
1977	3,908,529	7,727,161,833	44.4635	12.5507	0.0005058	1977
1978	3,912,484	7,738,893,352	44.4747	12.5528	0.0005056	1978
1979	3,916,441	7,750,636,739	44.4860	12.5550	0.0005053	1979
1980	3,920,400	7,762,392,000	44.4972	12.5571	0.0005051	1980
1981	3,924,361	7,774,159,141	44.5084	12.5592	0.0005048	1981
1982	3,928,324	7,785,938,168	44.5197	12.5613	0.0005045	1982
1983	3,932,289	7,797,729,087	44.5309	12.5634	0.0005043	1983
1984	3,936,256	7,809,531,904	44.5421	12.5655	0.0005040	1984
1985	3,940,225	7,821,346,625	44.5533	12.5676	0.0005038	1985
1986	3,944,196	7,833,173,256	44.5646	12.5697	0.0005035	1986
1987	3,948,169	7,845,011,803	44.5758	12.5719	0.0005033	1987
1988	3,952,144	7,856,862,272	44.5870	12.5740	0.0005030	1988
1989	3,956,121	7,868,724,669	44.5982	12.5761	0.0005028	1989
1990	3,960,100	7,880,599,000	44.6094	12.5782	0.0005025	1990
1991	3,964,081	7,892,485,271	44.6206	12.5803	0.0005023	1991
1992	3,968,064	7,904,383,488	44.6318	12.5824	0.0005020	1992
1993	3,972,049	7,916,293,657	44.6430	12.5845	0.0005018	1993
1994	3,976,036	7,928,215,784	44.6542	12.5866	0.0005015	1994
1995	3,980,025	7,940,149,875	44.6654	12.5887	0.0005013	1995
1996	3,984,016	7,952,095,936	44.6766	12.5908	0.0005010	1996
1997	3,988,009	7,964,053,973	44.6878	12.5929	0.0005008	1997
1998	3,992,004	7,976,023,992	44.6990	12.5950	0.0005005	1998
1999	3,996,001	7,988,005,999	44.7102	12.5971	0.0005003	1999
2000	4,000,000	8,000,000,000	44.7214	12.5992	0.0005000	2000

Squares of Mixed Numbers from  $\frac{1}{64}$  to 12, by 64thsI. Squares of Mixed Numbers from  $\frac{1}{64}$  to 6

	0	1	2	3	4	5
$\frac{1}{64}$	0.00024	1.03149	4.06274	9.09399	16.12524	25.15649
$\frac{1}{32}$	0.00098	1.06348	4.12598	9.18848	16.25098	25.31348
$\frac{3}{64}$	0.00220	1.09595	4.18970	9.28345	16.37720	25.47095
$\frac{1}{16}$	0.00391	1.12891	4.25391	9.37891	16.50391	25.62891
$\frac{5}{64}$	0.00610	1.16235	4.31860	9.47485	16.63110	25.78735
$\frac{3}{32}$	0.00879	1.19629	4.38379	9.57129	16.75879	25.94629
$\frac{7}{64}$	0.01196	1.23071	4.44946	9.66821	16.88596	26.10571
$\frac{1}{8}$	0.01562	1.26562	4.51562	9.76562	17.01562	26.26562
$\frac{9}{64}$	0.01978	1.30103	4.58228	9.86353	17.14478	26.42603
$\frac{5}{32}$	0.02441	1.33691	4.64941	9.96191	17.27441	26.58691
$1\frac{1}{64}$	0.02954	1.37329	4.71704	10.06079	17.40454	26.74829
$\frac{3}{16}$	0.03516	1.41016	4.78516	10.16016	17.53516	26.91016
$1\frac{3}{64}$	0.04126	1.44751	4.85376	10.26001	17.66626	27.07251
$\frac{7}{32}$	0.04785	1.48535	4.92285	10.36035	17.79785	27.23535
$1\frac{5}{64}$	0.05493	1.52368	4.99243	10.46118	17.92993	27.39868
$\frac{1}{4}$	0.06250	1.56250	5.06250	10.56250	18.06250	27.56250
$1\frac{7}{64}$	0.07056	1.60181	5.13306	10.66431	18.19556	27.72681
$\frac{9}{32}$	0.07910	1.64160	5.20410	10.76660	18.32910	27.89160
$1\frac{9}{64}$	0.08813	1.68188	5.27563	10.86938	18.46313	28.05688
$\frac{5}{16}$	0.09766	1.72266	5.34766	10.97266	18.59766	28.22266
$2\frac{1}{64}$	0.10767	1.76392	5.42017	11.07642	18.73267	28.38892
$1\frac{1}{32}$	0.11816	1.80566	5.49316	11.18066	18.86816	28.55566
$2\frac{3}{64}$	0.12915	1.84790	5.56663	11.28540	19.00415	28.72290
$\frac{3}{8}$	0.14062	1.89062	5.64062	11.39062	19.14062	28.89062
$2\frac{5}{64}$	0.15259	1.93384	5.71509	11.49634	19.27759	29.05884
$1\frac{3}{32}$	0.16504	1.97754	5.79004	11.60254	19.41504	29.22754
$2\frac{7}{64}$	0.17798	2.02173	5.86548	11.70923	19.55298	29.39673
$\frac{7}{16}$	0.19141	2.06641	5.94141	11.81641	19.69141	29.56641
$2\frac{9}{64}$	0.20532	2.11157	6.01782	11.92407	19.83032	29.73657
$1\frac{5}{32}$	0.21973	2.15723	6.09473	12.03223	19.96973	29.90723
$3\frac{1}{64}$	0.23462	2.20337	6.17212	12.14087	20.10962	30.07837
$\frac{1}{2}$	0.25000	2.25000	6.25000	12.25000	20.25000	30.25000
$3\frac{3}{64}$	0.26587	2.29712	6.32837	12.35962	20.39087	30.42212
$1\frac{7}{32}$	0.28223	2.34473	6.40723	12.46973	20.53223	30.59473
$3\frac{5}{64}$	0.29907	2.39282	6.48657	12.58032	20.67407	30.76782
$\frac{9}{16}$	0.31641	2.44141	6.56641	12.69141	20.81641	30.94141
$3\frac{7}{64}$	0.33423	2.49048	6.64673	12.80298	20.95923	31.11548
$1\frac{9}{32}$	0.35254	2.54004	6.72754	12.91504	21.10254	31.29004
$3\frac{9}{64}$	0.37134	2.59009	6.80884	13.02759	21.24634	31.46509
$\frac{5}{8}$	0.39062	2.64062	6.89062	13.14062	21.39062	31.64062
$4\frac{1}{64}$	0.41040	2.69165	6.97290	13.25415	21.53540	31.81665
$2\frac{1}{32}$	0.43066	2.74316	7.05566	13.36816	21.68066	31.99316

The tables of squares of mixed numbers from  $\frac{1}{64}$  to 12 are arranged in as compact a manner as possible, and a few words may be necessary to explain their use. Assume, for example, that the square of  $8\frac{3}{64}$  is required; 8 is located at the

Squares of Mixed Numbers from  $\frac{1}{4}$  to 6 (Continued)

	0	1	2	3	4	5
$4\frac{3}{4}$	0.45142	2.79517	7.13892	13.48267	21.82642	32.17017
$1\frac{1}{8}$	0.47266	2.84766	7.22266	13.59766	21.97266	32.34766
$4\frac{5}{8}$	0.49438	2.90063	7.30688	13.71313	22.11938	32.52563
$2\frac{3}{2}$	0.51660	2.95410	7.39160	13.82910	22.26660	32.70410
$4\frac{7}{8}$	0.53931	3.00806	7.47681	13.94556	22.41431	32.88306
$\frac{3}{4}$	0.56250	3.06250	7.56250	14.06250	22.56250	33.06250
$4\frac{9}{8}$	0.58618	3.11743	7.64868	14.17993	22.71118	33.24243
$2\frac{5}{2}$	0.61035	3.17285	7.73535	14.29785	22.86035	33.42285
$5\frac{1}{8}$	0.63501	3.22876	7.82251	14.41626	23.01001	33.60376
$1\frac{3}{10}$	0.66016	3.28516	7.91016	14.53516	23.16016	33.78516
$5\frac{3}{8}$	0.68579	3.34204	7.99829	14.65454	23.31079	33.96704
$2\frac{7}{2}$	0.71191	3.39941	8.08691	14.77441	23.46191	34.14941
$5\frac{5}{8}$	0.73853	3.45728	8.17603	14.89478	23.61363	34.33228
$\frac{1}{2}$	0.76562	3.51562	8.26562	15.01562	23.76562	34.51562
$5\frac{7}{8}$	0.79321	3.57446	8.35571	15.13696	23.91821	34.69946
$2\frac{9}{2}$	0.82129	3.63379	8.44629	15.25879	24.07129	34.88379
$5\frac{9}{8}$	0.84985	3.69360	8.53735	15.38110	24.22485	35.06860
$1\frac{5}{10}$	0.87891	3.75391	8.62891	15.50391	24.37891	35.25391
$6\frac{1}{8}$	0.90845	3.81470	8.72095	15.62720	24.53345	35.43970
$3\frac{1}{2}$	0.93848	3.87598	8.81348	15.75098	24.68848	35.62598
$6\frac{3}{8}$	0.96899	3.93774	8.90649	15.87524	24.84399	35.81274

II. Squares of Mixed Numbers from  $6\frac{1}{4}$  to 12

	6	7	8	9	10	11
$\frac{1}{4}$	36.18774	49.21899	64.25024	81.28149	100.31274	121.34399
$\frac{1}{2}$	36.37598	49.43848	64.50098	81.56348	100.62598	121.68848
$\frac{3}{4}$	36.56470	49.65845	64.75220	81.84595	100.93970	122.03345
$1\frac{1}{8}$	36.75391	49.87891	65.00391	82.12891	101.25391	122.37891
$\frac{5}{8}$	36.94360	50.09985	65.25610	82.41235	101.56860	122.72485
$\frac{3}{2}$	37.13379	50.32129	65.50879	82.69629	101.88379	123.07129
$\frac{7}{8}$	37.32446	50.54321	65.76196	82.98071	102.19946	123.41821
$\frac{1}{2}$	37.51562	50.76562	66.01562	83.26562	102.51562	123.76562
$\frac{9}{8}$	37.70728	50.98853	66.26978	83.55103	102.83228	124.11353
$\frac{5}{2}$	37.89941	51.21191	66.52441	83.83691	103.14941	124.46191
$1\frac{3}{8}$	38.09204	51.43579	66.77954	84.12329	103.46704	124.81079
$\frac{3}{10}$	38.28516	51.66016	67.03516	84.41016	103.78516	125.16016
$1\frac{5}{8}$	38.47876	51.88501	67.29126	84.69751	104.10376	125.51001
$\frac{7}{2}$	38.67285	52.11035	67.54785	84.98535	104.42285	125.86035
$1\frac{7}{8}$	38.86743	52.33618	67.80493	85.27368	104.74243	126.21110
$\frac{1}{4}$	39.06250	52.56250	68.06250	85.56250	105.06250	126.56250

top of its column, and  $\frac{5}{8}$  in the left-hand column. The square is then found to equal 65.25610. In the same way, the square of  $3\frac{3}{16}$  is found to equal 10.16016.



Squares of Mixed Numbers from  $6\frac{1}{4}$  to 12 (Continued)

	6	7	8	9	10	11
$17\frac{1}{4}$	39.25806	52.78931	68.32056	85.85181	105.38306	126.91431
$9\frac{3}{2}$	39.45410	53.01660	68.57910	86.14160	105.70410	127.26660
$19\frac{1}{4}$	39.65063	53.24438	68.83813	86.43188	106.02563	127.61938
$5\frac{1}{6}$	39.84766	53.47266	69.09766	86.72266	106.34766	127.97266
$21\frac{1}{4}$	40.04517	53.70142	69.35767	87.01392	106.67017	128.32642
$11\frac{3}{2}$	40.24316	53.93066	69.61816	87.30566	106.99316	128.68066
$23\frac{1}{4}$	40.44165	54.16040	69.87915	87.59790	107.31665	129.03540
$5\frac{5}{8}$	40.64062	54.39062	70.14062	87.89062	107.64062	129.39062
$25\frac{1}{4}$	40.84009	54.62134	70.40259	88.18384	107.96509	129.74634
$13\frac{3}{2}$	41.04004	54.85254	70.66504	88.47754	108.29004	130.10254
$27\frac{1}{4}$	41.24048	55.08423	70.92798	88.77173	108.61548	130.45923
$7\frac{1}{6}$	41.44141	55.31641	71.19141	89.06641	108.94141	130.81641
$29\frac{1}{4}$	41.64282	55.54907	71.45532	89.36157	109.26782	131.17407
$15\frac{3}{2}$	41.84473	55.78223	71.71973	89.65723	109.59473	131.53223
$31\frac{1}{4}$	42.04712	56.01587	71.98462	89.95337	109.92212	131.89087
$1\frac{1}{2}$	42.25000	56.25000	72.25000	90.25000	110.25000	132.25000
$33\frac{1}{4}$	42.45337	56.48462	72.51587	90.54712	110.57837	132.60962
$17\frac{3}{2}$	42.65723	56.71973	72.78223	90.84473	110.90723	132.96973
$35\frac{1}{4}$	42.86157	56.95532	73.04907	91.14282	111.23657	133.33032
$9\frac{5}{6}$	43.06641	57.19141	73.31641	91.44141	111.56641	133.69141
$37\frac{1}{4}$	43.27173	57.42798	73.58423	91.74048	111.89673	134.05298
$19\frac{3}{2}$	43.47754	57.66504	73.85254	92.04004	112.22754	134.41504
$39\frac{1}{4}$	43.68384	57.90259	74.12134	92.34009	112.55884	134.77759
$5\frac{7}{8}$	43.89062	58.14062	74.39062	92.64062	112.89062	135.14062
$41\frac{1}{4}$	44.09790	58.37915	74.66040	92.94165	113.22290	135.50415
$21\frac{3}{2}$	44.30566	58.61816	74.93066	93.24316	113.55566	135.86816
$43\frac{1}{4}$	44.51392	58.85767	75.20142	93.54517	113.88892	136.23267
$11\frac{1}{6}$	44.72266	59.09766	75.47266	93.84766	114.22266	136.59766
$45\frac{1}{4}$	44.93188	59.33813	75.74438	94.15063	114.55688	136.96313
$23\frac{3}{2}$	45.14160	59.57910	76.01660	94.45410	114.89160	137.32910
$47\frac{1}{4}$	45.35181	59.82056	76.28931	94.75806	115.22681	137.69556
$3\frac{3}{4}$	45.56250	60.06250	76.56250	95.06250	115.56250	138.06250
$49\frac{1}{4}$	45.77368	60.30493	76.83618	95.36743	115.89868	138.42993
$25\frac{3}{2}$	45.98535	60.54785	77.11035	95.67285	116.23535	138.79785
$51\frac{1}{4}$	46.19751	60.79126	77.38501	95.97876	116.57251	139.16626
$13\frac{1}{6}$	46.41016	61.03516	77.66016	96.28516	116.91016	139.53516
$53\frac{1}{4}$	46.62329	61.27954	77.93579	96.59204	117.24829	139.90454
$27\frac{3}{2}$	46.83691	61.52441	78.21191	96.89941	117.58691	140.27441
$55\frac{1}{4}$	47.05103	61.76978	78.48853	97.20728	117.92603	140.64478
$7\frac{5}{8}$	47.26562	62.01562	78.76562	97.51562	118.26562	141.01562
$57\frac{1}{4}$	47.48071	62.26196	79.04321	97.82446	118.60571	141.38696
$29\frac{3}{2}$	47.69629	62.50879	79.32129	98.13379	118.94629	141.75879
$59\frac{1}{4}$	47.91235	62.75610	79.59985	98.44360	119.28735	142.13110
$15\frac{1}{6}$	48.12891	63.00391	79.87891	98.75391	119.62891	142.50391
$61\frac{1}{4}$	48.34595	63.25220	80.15845	99.06470	119.97095	142.87720
$31\frac{3}{2}$	48.56348	63.50098	80.43848	99.37598	120.31348	143.25098
$63\frac{1}{4}$	48.78149	63.75024	80.71899	99.68774	120.65649	143.62524



Squares and Cubes of Numbers from  $\frac{1}{32}$  to 100

Advancing by 32nds to 2; from 2 to 10 by 16ths; from 10 to 100 by 8ths

No.	Square	Cube	No.	Square	Cube	No.	Square	Cube
$\frac{1}{32}$	0.000976	0.000031	$1\frac{1}{32}$	2.344727	3.590363	4	16.0000	64.0000
$\frac{1}{16}$	0.003906	0.000244	$\frac{9}{16}$	2.441406	3.814697	$\frac{1}{16}$	16.5039	67.0471
$\frac{3}{32}$	0.008789	0.000824	$\frac{19}{32}$	2.540039	4.048187	$\frac{1}{8}$	17.0156	70.1895
$\frac{1}{8}$	0.015625	0.001953	$\frac{5}{8}$	2.640625	4.291016	$\frac{3}{16}$	17.5352	73.4285
$\frac{5}{32}$	0.024414	0.003815	$2\frac{1}{32}$	2.743164	4.543365	$\frac{1}{4}$	18.0625	76.7656
$\frac{3}{16}$	0.035156	0.006592	$\frac{11}{16}$	2.847656	4.805419	$\frac{5}{16}$	18.5077	80.2024
$\frac{7}{32}$	0.047852	0.010468	$2\frac{3}{32}$	2.954102	5.077362	$\frac{3}{8}$	19.1406	83.7402
$\frac{1}{4}$	0.062500	0.015625	$\frac{3}{4}$	3.062500	5.359375	$\frac{7}{16}$	19.6914	87.3806
$\frac{9}{32}$	0.079102	0.022247	$2\frac{5}{32}$	3.172852	5.651642	$\frac{1}{2}$	20.2500	91.1250
$\frac{5}{16}$	0.097656	0.030518	$\frac{13}{16}$	3.285156	5.954346	$\frac{9}{16}$	20.8164	94.9749
$1\frac{1}{32}$	0.118164	0.040619	$2\frac{7}{32}$	3.399414	6.267660	$\frac{5}{8}$	21.3906	98.9316
$\frac{3}{8}$	0.140625	0.052734	$\frac{7}{8}$	3.515625	6.591797	$\frac{11}{16}$	21.9727	102.9968
$1\frac{3}{32}$	0.165039	0.067047	$2\frac{9}{32}$	3.633789	6.926910	$\frac{3}{4}$	22.5625	107.1719
$\frac{7}{16}$	0.191406	0.083740	$\frac{15}{16}$	3.753906	7.273193	$\frac{13}{16}$	23.1602	111.4583
$1\frac{5}{32}$	0.219727	0.102997	$3\frac{1}{32}$	3.875977	7.630828	$\frac{7}{8}$	23.7656	115.8574
$\frac{1}{2}$	0.250000	0.125000	2	4.000000	8.000000	$\frac{15}{16}$	24.3789	120.3708
$1\frac{7}{32}$	0.282227	0.149933	$\frac{1}{2}$	4.12598	8.38089	5	25.0000	125.0000
$\frac{9}{16}$	0.316406	0.177979	$\frac{1}{16}$	4.25391	8.77368	$\frac{1}{16}$	25.6289	129.7463
$1\frac{9}{32}$	0.352539	0.209320	$\frac{1}{8}$	4.51563	9.59570	$\frac{1}{8}$	26.2656	134.6113
$\frac{5}{8}$	0.390625	0.244141	$\frac{3}{16}$	4.78516	10.46754	$\frac{3}{16}$	26.9102	139.5964
$2\frac{1}{32}$	0.430664	0.282623	$\frac{1}{4}$	5.06250	11.39063	$\frac{1}{4}$	27.5625	144.7031
$\frac{11}{16}$	0.472656	0.324951	$\frac{5}{16}$	5.34766	12.36646	$\frac{5}{16}$	28.2227	149.9329
$2\frac{3}{32}$	0.516602	0.371307	$\frac{3}{8}$	5.64063	13.39648	$\frac{3}{8}$	28.8906	155.2871
$\frac{3}{4}$	0.562500	0.421875	$\frac{7}{16}$	5.94141	14.48218	$\frac{7}{16}$	29.5664	160.7673
$2\frac{5}{32}$	0.610352	0.476837	$\frac{1}{2}$	6.25000	15.62500	$\frac{1}{2}$	30.2500	166.3750
$\frac{13}{16}$	0.660156	0.536377	$\frac{9}{16}$	6.56641	16.82642	$\frac{9}{16}$	30.9414	172.1116
$2\frac{7}{32}$	0.711914	0.600678	$\frac{5}{8}$	6.89063	18.08789	$\frac{5}{8}$	31.6406	177.9785
$\frac{7}{8}$	0.765625	0.669922	$\frac{11}{16}$	7.22266	19.41089	$\frac{11}{16}$	32.3477	183.9773
$2\frac{9}{32}$	0.821289	0.744293	$\frac{3}{4}$	7.56250	20.79688	$\frac{3}{4}$	33.0625	190.1094
$\frac{15}{16}$	0.878906	0.823975	$\frac{13}{16}$	7.91016	22.24731	$\frac{13}{16}$	33.7852	196.3762
$3\frac{1}{32}$	0.938477	0.909149	$\frac{7}{8}$	8.26563	23.76367	$\frac{7}{8}$	34.5156	202.7793
1	1.000000	1.000000	$\frac{15}{16}$	8.62891	25.34741	$\frac{15}{16}$	35.2539	209.3201
$\frac{1}{32}$	1.063477	1.096800	3	9.00000	27.00000	6	36.0000	216.0000
$\frac{1}{16}$	1.128906	1.199463	$\frac{1}{16}$	9.37891	28.72290	$\frac{1}{16}$	36.7539	222.8206
$\frac{3}{32}$	1.196289	1.308441	$\frac{1}{8}$	9.76563	30.51758	$\frac{1}{8}$	37.5156	229.7832
$\frac{1}{8}$	1.265625	1.423828	$\frac{3}{16}$	10.16016	32.38550	$\frac{3}{16}$	38.2852	236.8894
$\frac{5}{32}$	1.336914	1.545807	$\frac{1}{4}$	10.56250	34.32813	$\frac{1}{4}$	39.0625	244.1406
$\frac{3}{16}$	1.410156	1.674561	$\frac{5}{16}$	10.97266	36.34692	$\frac{5}{16}$	39.8477	251.5383
$\frac{7}{32}$	1.485352	1.810272	$\frac{3}{8}$	11.39063	38.44336	$\frac{3}{8}$	40.6406	259.0840
$\frac{1}{4}$	1.562500	1.953125	$\frac{7}{16}$	11.81641	40.61889	$\frac{7}{16}$	41.4414	266.7791
$\frac{9}{32}$	1.641602	2.103302	$\frac{1}{2}$	12.25000	42.87500	$\frac{1}{2}$	42.2500	274.6250
$\frac{5}{16}$	1.722656	2.260986	$\frac{9}{16}$	12.69141	45.21313	$\frac{9}{16}$	43.0664	282.6233
$1\frac{1}{32}$	1.805664	2.426361	$\frac{5}{8}$	13.14063	47.63477	$\frac{5}{8}$	43.8906	290.7754
$\frac{3}{8}$	1.890625	2.599609	$\frac{11}{16}$	13.59766	50.14135	$\frac{11}{16}$	44.7227	299.0828
$1\frac{3}{32}$	1.977539	2.780914	$\frac{3}{4}$	14.06250	52.73438	$\frac{3}{4}$	45.5625	307.5469
$\frac{7}{16}$	2.066406	2.970459	$\frac{13}{16}$	14.53516	55.41528	$\frac{13}{16}$	46.4102	316.1692
$1\frac{5}{32}$	2.157227	3.168927	$\frac{7}{8}$	15.01563	58.18555	$\frac{7}{8}$	47.2656	324.9512
$\frac{1}{2}$	2.250000	3.375000	$\frac{15}{16}$	15.50391	61.04663	$\frac{15}{16}$	48.1289	333.8943

Squares and Cubes of Numbers from  $\frac{1}{2}$  to 100 (Continued)

No.	Square	Cube	No.	Square	Cube	No.	Square	Cube
7	49.0000	343.0000	10	100.0000	1000.0000	16	256.0000	4096.000
$\frac{1}{2}$	49.8789	352.2698	$\frac{1}{2}$	102.5156	1037.9707	$\frac{1}{2}$	260.0156	4192.752
$\frac{3}{4}$	50.7656	361.7051	$\frac{3}{4}$	105.0625	1076.8906	$\frac{3}{4}$	264.0625	4291.015
$\frac{5}{8}$	51.6602	371.3074	$\frac{5}{8}$	107.6406	1116.7715	$\frac{5}{8}$	268.1406	4390.802
$\frac{1}{4}$	52.5625	381.0781	$\frac{1}{4}$	110.2500	1157.6250	$\frac{1}{4}$	272.2500	4492.125
$\frac{3}{8}$	53.4727	391.0188	$\frac{3}{8}$	112.8906	1199.4629	$\frac{3}{8}$	276.3906	4594.994
$\frac{5}{16}$	54.3906	401.1309	$\frac{5}{16}$	115.5625	1242.2969	$\frac{5}{16}$	280.5625	4699.421
$\frac{7}{16}$	55.3164	411.4158	$\frac{7}{16}$	118.2656	1286.1387	$\frac{7}{16}$	284.7656	4805.419
$\frac{1}{2}$	56.2500	421.8750	11	121.0000	1331.0000	17	289.0000	4913.000
$\frac{9}{16}$	57.1914	432.5100	$\frac{1}{2}$	123.7656	1376.8926	$\frac{1}{2}$	293.2656	5022.173
$\frac{5}{8}$	58.1406	443.3223	$\frac{3}{4}$	126.5625	1423.8281	$\frac{3}{4}$	297.5625	5132.953
$\frac{11}{16}$	59.0977	454.3132	$\frac{5}{8}$	129.3906	1471.8184	$\frac{5}{8}$	301.8906	5245.349
$\frac{3}{4}$	60.0625	465.4844	$\frac{1}{2}$	132.2500	1520.8750	$\frac{1}{2}$	306.2500	5359.375
$\frac{13}{16}$	61.0352	476.8372	$\frac{3}{8}$	135.1406	1571.0098	$\frac{3}{8}$	310.6406	5475.041
$\frac{7}{8}$	62.0156	488.3730	$\frac{5}{16}$	138.0625	1622.2344	$\frac{5}{16}$	315.0625	5592.359
$\frac{15}{16}$	63.0039	500.0935	$\frac{7}{8}$	141.0156	1674.5605	$\frac{7}{8}$	319.5156	5711.341
8	64.0000	512.0000	12	144.0000	1728.0000	18	324.0000	5832.000
$\frac{1}{2}$	65.0039	524.0940	$\frac{1}{2}$	147.0156	1782.5645	$\frac{1}{2}$	328.5156	5954.345
$\frac{3}{8}$	66.0156	536.3770	$\frac{3}{4}$	150.0625	1838.2659	$\frac{3}{4}$	333.0625	6078.390
$\frac{5}{16}$	67.0352	548.8503	$\frac{5}{8}$	153.1406	1895.1152	$\frac{5}{8}$	337.6406	6204.146
$\frac{1}{4}$	68.0625	561.5156	$\frac{1}{4}$	156.2500	1953.1250	$\frac{1}{4}$	342.2500	6331.625
$\frac{3}{8}$	69.0977	574.3743	$\frac{3}{8}$	159.3906	2012.3066	$\frac{3}{8}$	346.8906	6460.837
$\frac{5}{16}$	70.1406	587.4277	$\frac{5}{16}$	162.5625	2072.6719	$\frac{5}{16}$	351.5625	6591.796
$\frac{7}{16}$	71.1914	600.6775	$\frac{7}{16}$	165.7656	2134.2324	$\frac{7}{16}$	356.2656	6724.513
$\frac{1}{2}$	72.2500	614.1250	13	169.0000	2197.0000	19	361.0000	6859.000
$\frac{9}{16}$	73.3164	627.7717	$\frac{1}{2}$	172.2656	2250.9863	$\frac{1}{2}$	365.7656	6995.267
$\frac{5}{8}$	74.3906	641.6191	$\frac{3}{4}$	175.5625	2326.2031	$\frac{3}{4}$	370.5625	7133.328
$\frac{11}{16}$	75.4727	655.6687	$\frac{5}{8}$	178.8906	2392.6621	$\frac{5}{8}$	375.3906	7273.193
$\frac{3}{4}$	76.5625	669.9219	$\frac{1}{2}$	182.2500	2460.3750	$\frac{1}{2}$	380.2500	7414.875
$\frac{13}{16}$	77.6602	684.3801	$\frac{3}{8}$	185.6406	2529.3535	$\frac{3}{8}$	385.1406	7558.384
$\frac{7}{8}$	78.7656	699.0449	$\frac{5}{16}$	189.0625	2599.6094	$\frac{5}{16}$	390.0625	7703.734
$\frac{15}{16}$	79.8789	713.9177	$\frac{7}{8}$	192.5156	2671.1543	$\frac{7}{8}$	395.0156	7850.935
9	81.0000	729.0000	14	196.0000	2744.0000	20	400.0000	8000.000
$\frac{1}{2}$	82.1289	744.2932	$\frac{1}{2}$	199.5156	2818.1582	$\frac{1}{2}$	405.0156	8150.939
$\frac{3}{8}$	83.2656	759.7988	$\frac{3}{4}$	203.0625	2893.6406	$\frac{3}{4}$	410.0625	8303.765
$\frac{5}{16}$	84.4102	775.5183	$\frac{5}{8}$	206.6406	2970.4590	$\frac{5}{8}$	415.1406	8458.490
$\frac{1}{4}$	85.5625	791.4531	$\frac{1}{4}$	210.2500	3048.6250	$\frac{1}{4}$	420.2500	8615.125
$\frac{3}{8}$	86.7227	807.4047	$\frac{3}{8}$	213.8906	3128.1504	$\frac{3}{8}$	425.3906	8773.681
$\frac{5}{16}$	87.8906	823.9746	$\frac{5}{16}$	217.5625	3209.0469	$\frac{5}{16}$	430.5625	8934.171
$\frac{7}{16}$	89.0664	840.5642	$\frac{7}{16}$	221.2656	3291.3262	$\frac{7}{16}$	435.7656	9096.607
$\frac{1}{2}$	90.2500	857.3750	15	225.0000	3375.0000	21	441.0000	9261.000
$\frac{9}{16}$	91.4414	874.4034	$\frac{1}{2}$	228.7656	3460.0801	$\frac{1}{2}$	446.2656	9427.361
$\frac{5}{8}$	92.6406	891.6660	$\frac{3}{4}$	232.5625	3546.5781	$\frac{3}{4}$	451.5625	9595.703
$\frac{11}{16}$	93.8477	909.1492	$\frac{5}{8}$	236.3906	3634.5059	$\frac{5}{8}$	456.8906	9766.037
$\frac{3}{4}$	95.0625	926.8594	$\frac{1}{2}$	240.2500	3723.8750	$\frac{1}{2}$	462.2500	9938.375
$\frac{13}{16}$	96.2852	944.7981	$\frac{3}{8}$	244.1406	3814.6973	$\frac{3}{8}$	467.6406	10.112.728
$\frac{7}{8}$	97.5156	962.9668	$\frac{5}{16}$	248.0625	3906.9844	$\frac{5}{16}$	473.0625	10.269.109
$\frac{15}{16}$	98.7539	981.3669	$\frac{7}{8}$	252.0156	4000.7480	$\frac{7}{8}$	478.5156	10.467.529

Squares and Cubes of Numbers from  $\frac{1}{2}$  to 100 (Continued)

No.	Square	Cube	No.	Square	Cube	No.	Square	Cube
22	484.0000	10,648.000	28	784.000	21,952.000	34	1156.000	39,304.000
$\frac{1}{2}$	489.5156	10,830.533	$\frac{1}{2}$	791.015	22,247.314	$\frac{1}{2}$	1164.515	39,739.095
$\frac{1}{4}$	495.0525	11,015.140	$\frac{1}{4}$	798.062	22,545.205	$\frac{1}{4}$	1173.062	40,177.390
$\frac{3}{8}$	500.6406	11,201.834	$\frac{3}{8}$	805.140	22,845.865	$\frac{3}{8}$	1181.640	40,618.896
$\frac{1}{2}$	506.2500	11,390.625	$\frac{1}{2}$	812.250	23,149.125	$\frac{1}{2}$	1190.250	41,063.625
$\frac{5}{8}$	511.8906	11,581.525	$\frac{5}{8}$	819.390	23,455.050	$\frac{5}{8}$	1198.890	41,511.587
$\frac{3}{4}$	517.5625	11,774.546	$\frac{3}{4}$	826.562	23,763.671	$\frac{3}{4}$	1207.562	41,962.796
$\frac{7}{8}$	523.2656	11,969.701	$\frac{7}{8}$	833.765	24,074.982	$\frac{7}{8}$	1216.265	42,417.263
23	529.0000	12,167.000	29	841.000	24,389.000	35	1225.000	42,875.000
$\frac{1}{2}$	534.7656	12,366.455	$\frac{1}{2}$	848.265	24,705.736	$\frac{1}{2}$	1233.765	43,336.017
$\frac{1}{4}$	540.5625	12,568.078	$\frac{1}{4}$	855.562	25,025.203	$\frac{1}{4}$	1242.562	43,800.328
$\frac{3}{8}$	546.3906	12,771.880	$\frac{3}{8}$	862.890	25,347.412	$\frac{3}{8}$	1251.390	44,267.943
$\frac{1}{2}$	552.2500	12,977.875	$\frac{1}{2}$	870.250	25,672.375	$\frac{1}{2}$	1260.250	44,738.875
$\frac{5}{8}$	558.1406	13,186.072	$\frac{5}{8}$	877.640	26,000.103	$\frac{5}{8}$	1269.140	45,213.134
$\frac{3}{4}$	564.0625	13,396.434	$\frac{3}{4}$	885.062	26,330.609	$\frac{3}{4}$	1278.062	45,690.734
$\frac{7}{8}$	570.0156	13,609.123	$\frac{7}{8}$	892.515	26,663.904	$\frac{7}{8}$	1287.015	46,171.685
24	576.0000	13,824.000	30	900.000	27,000.000	36	1296.000	46,656.000
$\frac{1}{2}$	582.0156	14,041.127	$\frac{1}{2}$	907.515	27,338.901	$\frac{1}{2}$	1305.015	47,143.689
$\frac{1}{4}$	588.0625	14,260.515	$\frac{1}{4}$	915.062	27,680.640	$\frac{1}{4}$	1314.062	47,634.765
$\frac{3}{8}$	594.1406	14,482.177	$\frac{3}{8}$	922.640	28,025.209	$\frac{3}{8}$	1323.140	48,129.240
$\frac{1}{2}$	600.2500	14,706.125	$\frac{1}{2}$	930.250	28,372.625	$\frac{1}{2}$	1332.250	48,627.125
$\frac{5}{8}$	606.3906	14,932.369	$\frac{5}{8}$	937.890	28,722.900	$\frac{5}{8}$	1341.390	49,128.431
$\frac{3}{4}$	612.5625	15,160.921	$\frac{3}{4}$	945.562	29,076.046	$\frac{3}{4}$	1350.562	49,633.171
$\frac{7}{8}$	618.7656	15,391.794	$\frac{7}{8}$	953.265	29,432.076	$\frac{7}{8}$	1359.765	50,141.357
25	625.0000	15,625.000	31	961.000	29,791.000	37	1369.000	50,653.000
$\frac{1}{2}$	631.2656	15,860.548	$\frac{1}{2}$	968.765	30,152.830	$\frac{1}{2}$	1378.265	51,168.111
$\frac{1}{4}$	637.5625	16,098.453	$\frac{1}{4}$	976.562	30,517.578	$\frac{1}{4}$	1387.562	51,686.703
$\frac{3}{8}$	643.8906	16,338.724	$\frac{3}{8}$	984.390	30,885.255	$\frac{3}{8}$	1396.890	52,208.787
$\frac{1}{2}$	650.2500	16,581.375	$\frac{1}{2}$	992.250	31,255.875	$\frac{1}{2}$	1406.250	52,734.375
$\frac{5}{8}$	656.6406	16,826.416	$\frac{5}{8}$	1000.140	31,629.447	$\frac{5}{8}$	1415.640	53,263.478
$\frac{3}{4}$	663.0625	17,073.859	$\frac{3}{4}$	1008.062	32,005.984	$\frac{3}{4}$	1425.062	53,796.109
$\frac{7}{8}$	669.5156	17,323.716	$\frac{7}{8}$	1016.015	32,385.498	$\frac{7}{8}$	1434.515	54,332.279
26	676.0000	17,576.000	32	1024.000	32,768.000	38	1444.000	54,872.000
$\frac{1}{2}$	682.5156	17,830.720	$\frac{1}{2}$	1032.015	33,153.502	$\frac{1}{2}$	1453.515	55,415.283
$\frac{1}{4}$	689.0625	18,097.890	$\frac{1}{4}$	1040.062	33,542.015	$\frac{1}{4}$	1463.062	55,962.140
$\frac{3}{8}$	695.6406	18,347.521	$\frac{3}{8}$	1048.140	33,933.552	$\frac{3}{8}$	1472.640	56,512.584
$\frac{1}{2}$	702.2500	18,609.625	$\frac{1}{2}$	1056.250	34,328.125	$\frac{1}{2}$	1482.250	57,066.625
$\frac{5}{8}$	708.8906	18,874.212	$\frac{5}{8}$	1064.390	34,725.744	$\frac{5}{8}$	1491.890	57,624.275
$\frac{3}{4}$	715.5625	19,141.296	$\frac{3}{4}$	1072.562	35,126.421	$\frac{3}{4}$	1501.562	58,185.546
$\frac{7}{8}$	722.2656	19,410.888	$\frac{7}{8}$	1080.765	35,530.169	$\frac{7}{8}$	1511.265	58,750.451
27	729.0000	19,683.000	33	1089.000	35,937.000	39	1521.000	59,319.000
$\frac{1}{2}$	735.7556	19,957.642	$\frac{1}{2}$	1097.265	36,346.923	$\frac{1}{2}$	1530.765	59,891.205
$\frac{1}{4}$	742.5625	20,234.828	$\frac{1}{4}$	1105.562	36,759.953	$\frac{1}{4}$	1540.562	60,467.078
$\frac{3}{8}$	749.3906	20,514.568	$\frac{3}{8}$	1113.890	37,176.099	$\frac{3}{8}$	1550.390	61,046.630
$\frac{1}{2}$	755.2500	20,796.875	$\frac{1}{2}$	1122.250	37,595.375	$\frac{1}{2}$	1560.250	61,629.875
$\frac{5}{8}$	763.1406	21,081.759	$\frac{5}{8}$	1130.640	38,017.791	$\frac{5}{8}$	1570.140	62,216.822
$\frac{3}{4}$	770.0625	21,369.234	$\frac{3}{4}$	1139.062	38,443.359	$\frac{3}{4}$	1580.062	62,807.484
$\frac{7}{8}$	777.0156	21,659.310	$\frac{7}{8}$	1147.515	38,872.091	$\frac{7}{8}$	1590.015	63,401.873

Squares and Cubes of Numbers from  $\frac{1}{2}$  to 100 (Continued)

No.	Square	Cube	No.	Square	Cube	No.	Square	Cube
40	1600.000	64,000.000	46	2116.000	97,336.00	52	2704.000	140,608.00
$\frac{1}{2}$	1610.015	64,601.877	$\frac{1}{2}$	2127.515	98,131.65	$\frac{1}{2}$	2717.015	141,624.43
$\frac{1}{4}$	1620.062	65,207.516	$\frac{1}{4}$	2139.032	98,931.64	$\frac{1}{4}$	2730.062	142,645.76
$\frac{3}{8}$	1630.140	65,816.928	$\frac{3}{8}$	2150.640	99,735.95	$\frac{3}{8}$	2743.140	143,671.99
$\frac{1}{2}$	1640.250	66,430.125	$\frac{1}{2}$	2162.250	100,544.62	$\frac{1}{2}$	2756.250	144,703.12
$\frac{5}{8}$	1650.390	67,047.119	$\frac{5}{8}$	2173.890	101,357.65	$\frac{5}{8}$	2769.390	145,739.18
$\frac{3}{4}$	1660.562	67,667.922	$\frac{3}{4}$	2185.562	102,175.04	$\frac{3}{4}$	2782.562	146,780.17
$\frac{7}{8}$	1670.765	68,292.545	$\frac{7}{8}$	2197.265	102,996.82	$\frac{7}{8}$	2795.765	147,826.10
41	1681.000	68,921.000	47	2209.000	103,823.00	53	2809.000	148,877.00
$\frac{1}{2}$	1691.265	69,553.299	$\frac{1}{2}$	2220.765	104,653.58	$\frac{1}{2}$	2822.265	149,932.86
$\frac{1}{4}$	1701.562	70,189.453	$\frac{1}{4}$	2232.562	105,488.57	$\frac{1}{4}$	2835.562	150,993.70
$\frac{3}{8}$	1711.890	70,829.475	$\frac{3}{8}$	2244.390	106,328.00	$\frac{3}{8}$	2848.890	152,059.53
$\frac{1}{2}$	1722.250	71,473.375	$\frac{1}{2}$	2256.250	107,171.87	$\frac{1}{2}$	2862.250	153,130.37
$\frac{5}{8}$	1732.640	72,121.166	$\frac{5}{8}$	2268.140	108,020.19	$\frac{5}{8}$	2875.640	154,206.22
$\frac{3}{4}$	1743.062	72,772.859	$\frac{3}{4}$	2280.062	108,872.98	$\frac{3}{4}$	2889.062	155,287.10
$\frac{7}{8}$	1753.515	73,428.467	$\frac{7}{8}$	2292.015	109,730.24	$\frac{7}{8}$	2902.515	156,373.02
42	1764.000	74,088.000	48	2304.000	110,592.00	54	2916.000	157,464.00
$\frac{1}{2}$	1774.515	74,751.471	$\frac{1}{2}$	2316.015	111,458.25	$\frac{1}{2}$	2929.515	158,560.03
$\frac{1}{4}$	1785.062	75,418.891	$\frac{1}{4}$	2328.062	112,329.01	$\frac{1}{4}$	2943.062	159,661.14
$\frac{3}{8}$	1795.640	76,090.271	$\frac{3}{8}$	2340.140	113,204.30	$\frac{3}{8}$	2956.640	160,767.33
$\frac{1}{2}$	1806.250	76,765.625	$\frac{1}{2}$	2352.250	114,084.12	$\frac{1}{2}$	2970.250	161,878.62
$\frac{5}{8}$	1816.890	77,444.963	$\frac{5}{8}$	2364.390	114,968.49	$\frac{5}{8}$	2983.890	162,995.02
$\frac{3}{4}$	1827.562	78,128.297	$\frac{3}{4}$	2376.562	115,857.42	$\frac{3}{4}$	2997.562	164,116.54
$\frac{7}{8}$	1838.265	78,815.639	$\frac{7}{8}$	2388.765	116,750.92	$\frac{7}{8}$	3011.265	165,243.20
43	1849.000	79,507.000	49	2401.000	117,649.00	55	3025.000	166,375.00
$\frac{1}{2}$	1859.765	80,202.393	$\frac{1}{2}$	2413.265	118,551.67	$\frac{1}{2}$	3038.765	167,511.95
$\frac{1}{4}$	1870.562	80,901.828	$\frac{1}{4}$	2425.562	119,458.95	$\frac{1}{4}$	3052.562	168,654.07
$\frac{3}{8}$	1881.390	81,605.318	$\frac{3}{8}$	2437.890	120,370.85	$\frac{3}{8}$	3066.390	169,801.38
$\frac{1}{2}$	1892.250	82,312.875	$\frac{1}{2}$	2450.250	121,287.37	$\frac{1}{2}$	3080.250	170,953.87
$\frac{5}{8}$	1903.140	83,024.510	$\frac{5}{8}$	2462.640	122,208.54	$\frac{5}{8}$	3094.140	172,111.57
$\frac{3}{4}$	1914.062	83,740.234	$\frac{3}{4}$	2475.062	123,134.35	$\frac{3}{4}$	3108.062	173,274.48
$\frac{7}{8}$	1925.015	84,460.061	$\frac{7}{8}$	2487.515	124,064.84	$\frac{7}{8}$	3122.015	174,442.62
44	1936.000	85,184.000	50	2500.000	125,000.00	56	3136.000	175,616.00
$\frac{1}{2}$	1947.015	85,912.064	$\frac{1}{2}$	2512.515	125,939.84	$\frac{1}{2}$	3150.015	176,794.62
$\frac{1}{4}$	1958.062	86,644.266	$\frac{1}{4}$	2525.062	126,884.39	$\frac{1}{4}$	3164.062	177,978.51
$\frac{3}{8}$	1969.140	87,380.615	$\frac{3}{8}$	2537.640	127,833.64	$\frac{3}{8}$	3178.140	179,167.67
$\frac{1}{2}$	1980.250	88,121.125	$\frac{1}{2}$	2550.250	128,787.62	$\frac{1}{2}$	3192.250	180,362.12
$\frac{5}{8}$	1991.390	88,865.807	$\frac{5}{8}$	2562.890	129,746.33	$\frac{5}{8}$	3206.390	181,561.86
$\frac{3}{4}$	2002.562	89,614.672	$\frac{3}{4}$	2575.562	130,709.79	$\frac{3}{4}$	3220.562	182,766.92
$\frac{7}{8}$	2013.765	90,367.732	$\frac{7}{8}$	2588.265	131,678.01	$\frac{7}{8}$	3234.765	183,977.29
45	2025.000	91,125.000	51	2601.000	132,651.00	57	3249.000	185,193.00
$\frac{1}{2}$	2036.265	91,886.486	$\frac{1}{2}$	2613.765	133,628.76	$\frac{1}{2}$	3263.265	186,414.04
$\frac{1}{4}$	2047.562	92,652.203	$\frac{1}{4}$	2626.562	134,611.32	$\frac{1}{4}$	3277.562	187,640.45
$\frac{3}{8}$	2058.890	93,422.162	$\frac{3}{8}$	2639.390	135,598.69	$\frac{3}{8}$	3291.890	188,872.22
$\frac{1}{2}$	2070.250	94,192.375	$\frac{1}{2}$	2652.250	136,590.87	$\frac{1}{2}$	3306.250	190,109.37
$\frac{5}{8}$	2081.640	94,974.854	$\frac{5}{8}$	2665.140	137,587.88	$\frac{5}{8}$	3320.640	191,351.91
$\frac{3}{4}$	2093.062	95,757.609	$\frac{3}{4}$	2678.062	138,589.73	$\frac{3}{4}$	3335.062	192,599.85
$\frac{7}{8}$	2104.515	96,544.654	$\frac{7}{8}$	2691.015	139,596.43	$\frac{7}{8}$	3349.515	193,853.21



Squares and Cubes of Numbers from  $\frac{1}{2}$  to 100 (Continued)

No.	Square	Cube	No.	Square	Cube	No.	Square	Cube
58	3364.000	195,112.00	64	4096.000	262,144.00	70	4900.000	343,000.00
$\frac{1}{2}$	3375.515	196,376.22	$\frac{1}{2}$	4112.015	263,683.00	$\frac{1}{2}$	4917.515	344,840.78
$\frac{1}{4}$	3393.062	197,645.89	$\frac{1}{4}$	4128.062	265,228.01	$\frac{1}{4}$	4935.062	346,688.14
$\frac{3}{8}$	3407.640	198,921.02	$\frac{3}{8}$	4144.140	266,779.05	$\frac{3}{8}$	4952.640	348,542.08
$\frac{1}{2}$	3422.250	200,201.62	$\frac{1}{2}$	4160.250	268,336.12	$\frac{1}{2}$	4970.250	350,402.62
$\frac{5}{8}$	3435.890	201,487.71	$\frac{5}{8}$	4176.390	269,899.24	$\frac{5}{8}$	4987.890	352,269.77
$\frac{3}{4}$	3451.562	202,779.29	$\frac{3}{4}$	4192.562	271,468.42	$\frac{3}{4}$	5005.562	354,143.54
$\frac{7}{8}$	3466.265	204,076.38	$\frac{7}{8}$	4208.765	273,043.67	$\frac{7}{8}$	5023.265	356,023.95
59	3481.000	205,379.00	65	4225.000	274,625.00	71	5041.000	357,911.00
$\frac{1}{2}$	3495.765	206,687.14	$\frac{1}{2}$	4241.265	276,212.42	$\frac{1}{2}$	5058.765	359,804.70
$\frac{1}{4}$	3510.562	208,000.82	$\frac{1}{4}$	4257.562	277,805.95	$\frac{1}{4}$	5076.562	361,705.07
$\frac{3}{8}$	3525.390	209,320.06	$\frac{3}{8}$	4273.890	279,405.60	$\frac{3}{8}$	5094.390	363,612.13
$\frac{1}{2}$	3540.250	210,644.87	$\frac{1}{2}$	4290.250	281,011.37	$\frac{1}{2}$	5112.250	365,525.87
$\frac{5}{8}$	3555.140	211,975.25	$\frac{5}{8}$	4306.640	282,623.29	$\frac{5}{8}$	5130.140	367,446.32
$\frac{3}{4}$	3570.062	213,311.23	$\frac{3}{4}$	4323.062	284,241.35	$\frac{3}{4}$	5148.062	369,373.48
$\frac{7}{8}$	3585.015	214,652.81	$\frac{7}{8}$	4339.515	285,865.59	$\frac{7}{8}$	5166.015	371,307.37
60	3600.000	216,000.00	66	4356.000	287,496.00	72	5184.000	373,248.00
$\frac{1}{2}$	3615.015	217,352.81	$\frac{1}{2}$	4372.515	289,132.59	$\frac{1}{2}$	5202.015	375,195.37
$\frac{1}{4}$	3630.062	218,711.26	$\frac{1}{4}$	4389.062	290,775.39	$\frac{1}{4}$	5220.062	377,149.51
$\frac{3}{8}$	3645.140	220,075.35	$\frac{3}{8}$	4405.640	292,424.39	$\frac{3}{8}$	5238.140	379,110.42
$\frac{1}{2}$	3660.250	221,445.12	$\frac{1}{2}$	4422.250	294,079.62	$\frac{1}{2}$	5256.250	381,078.12
$\frac{5}{8}$	3675.390	222,820.55	$\frac{5}{8}$	4438.890	295,741.08	$\frac{5}{8}$	5274.390	383,052.61
$\frac{3}{4}$	3690.562	224,201.67	$\frac{3}{4}$	4455.562	297,408.79	$\frac{3}{4}$	5292.562	385,033.92
$\frac{7}{8}$	3705.765	225,588.43	$\frac{7}{8}$	4472.265	299,082.76	$\frac{7}{8}$	5310.765	387,022.04
61	3721.000	226,981.00	67	4489.000	300,763.00	73	5329.000	389,017.00
$\frac{1}{2}$	3736.265	228,379.23	$\frac{1}{2}$	4505.765	302,449.51	$\frac{1}{2}$	5347.265	391,018.79
$\frac{1}{4}$	3751.562	229,783.20	$\frac{1}{4}$	4522.562	304,142.32	$\frac{1}{4}$	5365.562	393,027.45
$\frac{3}{8}$	3766.890	231,192.91	$\frac{3}{8}$	4539.390	305,841.44	$\frac{3}{8}$	5383.890	395,042.97
$\frac{1}{2}$	3782.250	232,608.37	$\frac{1}{2}$	4556.250	307,546.87	$\frac{1}{2}$	5402.250	397,065.37
$\frac{5}{8}$	3797.640	234,029.60	$\frac{5}{8}$	4573.140	309,258.63	$\frac{5}{8}$	5420.635	399,094.29
$\frac{3}{4}$	3813.062	235,456.60	$\frac{3}{4}$	4590.062	310,976.73	$\frac{3}{4}$	5439.062	401,130.85
$\frac{7}{8}$	3828.515	236,889.40	$\frac{7}{8}$	4607.015	312,701.18	$\frac{7}{8}$	5457.515	403,173.96
62	3844.000	238,328.00	68	4624.000	314,432.00	74	5476.000	405,204.00
$\frac{1}{2}$	3859.515	239,772.40	$\frac{1}{2}$	4641.015	316,169.18	$\frac{1}{2}$	5494.515	407,280.97
$\frac{1}{4}$	3875.062	241,222.64	$\frac{1}{4}$	4658.062	317,912.76	$\frac{1}{4}$	5513.062	409,344.89
$\frac{3}{8}$	3890.640	242,678.70	$\frac{3}{8}$	4675.140	319,662.74	$\frac{3}{8}$	5531.640	411,415.77
$\frac{1}{2}$	3906.250	244,140.62	$\frac{1}{2}$	4692.250	321,419.12	$\frac{1}{2}$	5550.250	413,493.62
$\frac{5}{8}$	3921.890	245,608.40	$\frac{5}{8}$	4709.390	323,181.93	$\frac{5}{8}$	5568.890	415,578.46
$\frac{3}{4}$	3937.562	247,082.04	$\frac{3}{4}$	4726.562	324,951.17	$\frac{3}{4}$	5587.562	417,670.29
$\frac{7}{8}$	3953.265	248,561.57	$\frac{7}{8}$	4743.765	326,726.85	$\frac{7}{8}$	5606.265	419,769.13
63	3969.000	250,047.00	69	4761.000	328,509.00	75	5625.000	421,875.00
$\frac{1}{2}$	3984.765	251,538.33	$\frac{1}{2}$	4778.265	330,297.61	$\frac{1}{2}$	5643.765	423,987.89
$\frac{1}{4}$	4000.562	253,035.57	$\frac{1}{4}$	4795.562	332,092.70	$\frac{1}{4}$	5662.562	426,107.82
$\frac{3}{8}$	4016.390	254,538.75	$\frac{3}{8}$	4812.890	333,894.28	$\frac{3}{8}$	5681.390	428,234.81
$\frac{1}{2}$	4032.250	256,047.87	$\frac{1}{2}$	4830.250	335,702.37	$\frac{1}{2}$	5700.250	430,368.87
$\frac{5}{8}$	4048.140	257,562.94	$\frac{5}{8}$	4847.640	337,516.97	$\frac{5}{8}$	5719.140	432,510.01
$\frac{3}{4}$	4064.062	259,083.98	$\frac{3}{4}$	4865.062	339,338.10	$\frac{3}{4}$	5738.062	434,658.23
$\frac{7}{8}$	4080.015	260,610.99	$\frac{7}{8}$	4882.515	341,165.77	$\frac{7}{8}$	5757.015	436,813.56

Squares and Cubes of Numbers from  $\frac{1}{2}$  to 100 (Continued)

No.	Square	Cube	No.	Square	Cube	No.	Square	Cube
76	5776.000	438,976.00	82	6724.000	551,368.00	88	7744.000	681,472.00
$\frac{1}{2}$	5795.015	441,145.56	$\frac{1}{2}$	6744.515	553,893.34	$\frac{1}{2}$	7766.015	684,380.12
$\frac{3}{4}$	5814.062	443,322.26	$\frac{3}{4}$	6765.062	556,426.39	$\frac{3}{4}$	7788.062	687,296.51
$\frac{5}{8}$	5833.140	445,506.11	$\frac{5}{8}$	6785.640	558,967.14	$\frac{5}{8}$	7810.140	690,221.17
$\frac{1}{2}$	5852.250	447,697.12	$\frac{1}{2}$	6806.250	561,515.62	$\frac{1}{2}$	7832.250	693,154.12
$\frac{5}{8}$	5871.390	449,895.30	$\frac{5}{8}$	6826.890	564,071.83	$\frac{5}{8}$	7854.390	696,095.36
$\frac{3}{4}$	5890.562	452,100.67	$\frac{3}{4}$	6847.562	566,635.79	$\frac{3}{4}$	7876.562	699,044.92
$\frac{7}{8}$	5909.765	454,313.23	$\frac{7}{8}$	6868.265	569,207.51	$\frac{7}{8}$	7898.765	702,002.79
77	5929.000	456,533.00	83	6889.000	571,787.00	89	7921.000	704,969.00
$\frac{1}{2}$	5948.265	458,759.98	$\frac{1}{2}$	6909.765	574,374.26	$\frac{1}{2}$	7943.265	707,943.54
$\frac{3}{4}$	5967.562	460,994.20	$\frac{3}{4}$	6930.562	576,969.32	$\frac{3}{4}$	7965.562	710,926.45
$\frac{5}{8}$	5986.890	463,235.66	$\frac{5}{8}$	6951.390	579,572.19	$\frac{5}{8}$	7987.890	713,917.72
$\frac{1}{2}$	6006.250	465,484.37	$\frac{1}{2}$	6972.250	582,182.87	$\frac{1}{2}$	8010.250	716,917.37
$\frac{5}{8}$	6025.640	467,740.35	$\frac{5}{8}$	6993.140	584,801.38	$\frac{5}{8}$	8032.640	719,925.41
$\frac{3}{4}$	6045.062	470,003.60	$\frac{3}{4}$	7014.062	587,427.73	$\frac{3}{4}$	8055.062	722,941.85
$\frac{7}{8}$	6064.515	472,274.15	$\frac{7}{8}$	7035.015	590,061.93	$\frac{7}{8}$	8077.515	725,966.71
78	6084.000	474,552.00	84	7056.000	592,704.00	90	8100.000	729,000.00
$\frac{1}{2}$	6103.515	476,837.15	$\frac{1}{2}$	7077.015	595,353.93	$\frac{1}{2}$	8122.515	732,041.72
$\frac{3}{4}$	6123.062	479,129.64	$\frac{3}{4}$	7098.062	598,011.76	$\frac{3}{4}$	8145.062	735,091.89
$\frac{5}{8}$	6142.640	481,429.45	$\frac{5}{8}$	7119.140	600,677.49	$\frac{5}{8}$	8167.640	738,150.52
$\frac{1}{2}$	6162.250	483,736.62	$\frac{1}{2}$	7140.250	603,351.12	$\frac{1}{2}$	8190.250	741,217.62
$\frac{5}{8}$	6181.890	486,051.15	$\frac{5}{8}$	7161.390	606,032.68	$\frac{5}{8}$	8212.890	744,293.21
$\frac{3}{4}$	6201.562	488,373.04	$\frac{3}{4}$	7182.562	608,722.17	$\frac{3}{4}$	8235.562	747,377.29
$\frac{7}{8}$	6221.265	490,702.32	$\frac{7}{8}$	7203.765	611,419.60	$\frac{7}{8}$	8258.265	750,469.88
79	6241.000	493,039.00	85	7225.000	614,125.00	91	8281.000	753,571.00
$\frac{1}{2}$	6260.765	495,383.08	$\frac{1}{2}$	7246.265	616,838.36	$\frac{1}{2}$	8303.765	756,680.64
$\frac{3}{4}$	6280.562	497,734.57	$\frac{3}{4}$	7267.562	619,559.70	$\frac{3}{4}$	8326.562	759,798.82
$\frac{5}{8}$	6300.390	500,093.50	$\frac{5}{8}$	7288.890	622,289.03	$\frac{5}{8}$	8349.390	762,925.56
$\frac{1}{2}$	6320.250	502,459.87	$\frac{1}{2}$	7310.250	625,026.37	$\frac{1}{2}$	8372.250	766,060.87
$\frac{5}{8}$	6340.140	504,833.69	$\frac{5}{8}$	7331.640	627,771.72	$\frac{5}{8}$	8395.140	769,204.76
$\frac{3}{4}$	6360.062	507,214.68	$\frac{3}{4}$	7353.062	630,525.10	$\frac{3}{4}$	8418.062	772,357.23
$\frac{7}{8}$	6380.015	509,603.74	$\frac{7}{8}$	7374.515	633,286.52	$\frac{7}{8}$	8441.015	775,518.31
80	6400.000	512,000.00	86	7396.000	636,056.00	92	8464.000	778,688.00
$\frac{1}{2}$	6420.015	514,403.75	$\frac{1}{2}$	7417.515	638,833.53	$\frac{1}{2}$	8487.015	781,866.31
$\frac{3}{4}$	6440.062	516,815.01	$\frac{3}{4}$	7439.062	641,619.14	$\frac{3}{4}$	8510.062	785,053.26
$\frac{5}{8}$	6460.140	519,233.80	$\frac{5}{8}$	7460.640	644,412.83	$\frac{5}{8}$	8533.140	788,248.86
$\frac{1}{2}$	6480.250	521,660.12	$\frac{1}{2}$	7482.250	647,214.62	$\frac{1}{2}$	8556.250	791,453.12
$\frac{5}{8}$	6500.390	524,093.99	$\frac{5}{8}$	7503.890	650,024.52	$\frac{5}{8}$	8579.390	794,666.05
$\frac{3}{4}$	6520.562	526,535.42	$\frac{3}{4}$	7525.562	652,842.54	$\frac{3}{4}$	8602.562	797,887.67
$\frac{7}{8}$	6540.765	528,984.42	$\frac{7}{8}$	7547.265	655,668.70	$\frac{7}{8}$	8625.765	801,117.98
81	6561.000	531,441.00	87	7569.000	658,503.00	93	8649.000	804,357.00
$\frac{1}{2}$	6581.265	533,905.17	$\frac{1}{2}$	7590.765	661,345.45	$\frac{1}{2}$	8672.265	807,604.73
$\frac{3}{4}$	6601.562	536,376.95	$\frac{3}{4}$	7612.562	664,196.07	$\frac{3}{4}$	8695.562	810,861.20
$\frac{5}{8}$	6621.890	538,856.35	$\frac{5}{8}$	7634.390	667,054.88	$\frac{5}{8}$	8718.890	814,126.41
$\frac{1}{2}$	6642.250	541,343.37	$\frac{1}{2}$	7656.250	669,921.87	$\frac{1}{2}$	8742.250	817,400.37
$\frac{5}{8}$	6662.640	543,838.04	$\frac{5}{8}$	7678.140	672,797.07	$\frac{5}{8}$	8765.640	820,683.10
$\frac{3}{4}$	6683.062	546,340.35	$\frac{3}{4}$	7700.062	675,680.48	$\frac{3}{4}$	8789.062	823,974.61
$\frac{7}{8}$	6703.515	548,850.34	$\frac{7}{8}$	7722.015	678,572.12	$\frac{7}{8}$	8812.515	827,274.90



Circumferences and Areas of Circles

Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area
$\frac{1}{64}$	0.0491	0.0002	2	6.2832	3.1416	5	15.7080	19.635
$\frac{1}{32}$	0.0982	0.0008	$\frac{1}{16}$	6.4795	3.3410	$\frac{1}{8}$	15.9043	20.129
$\frac{1}{16}$	0.1964	0.0031	$\frac{1}{8}$	6.6759	3.5466	$\frac{1}{4}$	16.1007	20.629
$\frac{1}{8}$	0.2945	0.0069	$\frac{3}{16}$	6.8722	3.7583	$\frac{3}{16}$	16.2970	21.135
$\frac{1}{4}$	0.3927	0.0123	$\frac{1}{4}$	7.0686	3.9761	$\frac{1}{2}$	16.4934	21.648
$\frac{1}{2}$	0.4909	0.0192	$\frac{5}{16}$	7.2649	4.2000	$\frac{5}{16}$	16.6897	22.166
$\frac{3}{4}$	0.5890	0.0276	$\frac{3}{8}$	7.4613	4.4301	$\frac{3}{8}$	16.8861	22.691
$\frac{7}{8}$	0.6872	0.0376	$\frac{7}{16}$	7.6576	4.6664	$\frac{7}{16}$	17.0824	23.221
$1\frac{1}{4}$	0.7854	0.0491	$\frac{1}{2}$	7.8540	4.9087	$\frac{1}{2}$	17.2788	23.758
$1\frac{1}{2}$	0.8836	0.0621	$\frac{9}{16}$	8.0503	5.1572	$\frac{9}{16}$	17.4751	24.301
$1\frac{3}{4}$	0.9817	0.0767	$\frac{5}{8}$	8.2467	5.4119	$\frac{5}{8}$	17.6715	24.850
$1\frac{7}{8}$	1.0799	0.0928	$1\frac{1}{16}$	8.4430	5.6727	$1\frac{1}{16}$	17.8678	25.406
$2$	1.1781	0.1105	$\frac{3}{4}$	8.6394	5.9396	$\frac{3}{4}$	18.0642	25.967
$2\frac{1}{8}$	1.2763	0.1296	$1\frac{1}{8}$	8.8357	6.2126	$1\frac{1}{8}$	18.2605	26.535
$2\frac{1}{4}$	1.3745	0.1503	$\frac{7}{8}$	9.0321	6.4918	$\frac{7}{8}$	18.4569	27.109
$2\frac{1}{2}$	1.4726	0.1726	$1\frac{1}{2}$	9.2284	6.7771	$1\frac{1}{2}$	18.6532	27.688
$2\frac{3}{4}$	1.5708	0.1964	3	9.4248	7.0686	6	18.8496	28.274
$2\frac{7}{8}$	1.6690	0.2217	$\frac{1}{2}$	9.6211	7.3662	$\frac{1}{2}$	19.2423	29.465
$3$	1.7672	0.2485	$\frac{1}{4}$	9.8175	7.6699	$\frac{1}{4}$	19.6350	30.680
$3\frac{1}{8}$	1.8653	0.2769	$\frac{3}{16}$	10.0138	7.9798	$\frac{3}{16}$	20.0277	31.919
$3\frac{1}{4}$	1.9635	0.3068	$\frac{1}{4}$	10.2102	8.2958	$\frac{1}{2}$	20.4204	33.183
$3\frac{1}{2}$	2.0617	0.3382	$\frac{5}{16}$	10.4065	8.6179	$\frac{5}{16}$	20.8131	34.472
$3\frac{3}{4}$	2.1598	0.3712	$\frac{3}{8}$	10.6029	8.9462	$\frac{3}{4}$	21.2058	35.785
$3\frac{7}{8}$	2.2580	0.4057	$\frac{7}{16}$	10.7992	9.2806	$\frac{7}{8}$	21.5984	37.122
$4$	2.3562	0.4418	$\frac{1}{2}$	10.9956	9.6211	7	21.9911	38.485
$4\frac{1}{8}$	2.4544	0.4794	$\frac{5}{8}$	11.1919	9.9678	$\frac{1}{8}$	22.3838	39.871
$4\frac{1}{4}$	2.5525	0.5185	$\frac{3}{4}$	11.3883	10.321	$\frac{1}{4}$	22.7765	41.282
$4\frac{1}{2}$	2.6507	0.5591	$1\frac{1}{16}$	11.5846	10.680	$\frac{3}{8}$	23.1692	42.718
$4\frac{3}{4}$	2.7489	0.6013	$\frac{1}{2}$	11.7810	11.045	$\frac{1}{2}$	23.5619	44.179
$4\frac{7}{8}$	2.8471	0.6450	$1\frac{1}{8}$	11.9773	11.416	$\frac{5}{8}$	23.9546	45.664
$5$	2.9452	0.6903	$\frac{7}{8}$	12.1737	11.793	$\frac{3}{4}$	24.3473	47.173
$5\frac{1}{8}$	3.0434	0.7371	$1\frac{1}{2}$	12.3700	12.177	$\frac{7}{8}$	24.7400	48.707
$5\frac{1}{4}$	3.1416	0.7854	4	12.5664	12.566	8	25.1327	50.265
$5\frac{1}{2}$	3.3379	0.8866	$\frac{1}{4}$	12.7627	12.962	$\frac{1}{8}$	25.5254	51.849
$5\frac{3}{4}$	3.5343	0.9940	$\frac{3}{8}$	12.9591	13.364	$\frac{1}{4}$	25.9181	53.456
$5\frac{7}{8}$	3.7306	1.1075	$\frac{1}{2}$	13.1554	13.772	$\frac{3}{16}$	26.3108	55.088
$6$	3.9270	1.2272	$\frac{3}{4}$	13.3518	14.186	$\frac{1}{2}$	26.7035	56.745
$6\frac{1}{8}$	4.1233	1.3530	$\frac{5}{16}$	13.5481	14.607	$\frac{5}{16}$	27.0962	58.426
$6\frac{1}{4}$	4.3197	1.4849	$\frac{3}{8}$	13.7445	15.033	$\frac{3}{4}$	27.4889	60.132
$6\frac{1}{2}$	4.5160	1.6230	$\frac{7}{16}$	13.9408	15.466	$\frac{7}{8}$	27.8816	61.862
$6\frac{3}{4}$	4.7124	1.7671	$\frac{1}{2}$	14.1372	15.904	9	28.2743	63.617
$6\frac{7}{8}$	4.9087	1.9175	$\frac{9}{16}$	14.3335	16.349	$\frac{1}{8}$	28.6670	65.397
$7$	5.1051	2.0739	$\frac{5}{8}$	14.5299	16.800	$\frac{1}{4}$	29.0597	67.201
$7\frac{1}{8}$	5.3014	2.2365	$1\frac{1}{16}$	14.7262	17.257	$\frac{3}{8}$	29.4524	69.029
$7\frac{1}{4}$	5.4978	2.4053	$\frac{3}{4}$	14.9226	17.721	$\frac{1}{2}$	29.8451	70.882
$7\frac{1}{2}$	5.6941	2.5802	$1\frac{1}{8}$	15.1189	18.190	$\frac{5}{8}$	30.2378	72.760
$7\frac{3}{4}$	5.8905	2.7612	$\frac{7}{8}$	15.3153	18.665	$\frac{3}{4}$	30.6305	74.662
$7\frac{7}{8}$	6.0868	2.9483	$1\frac{1}{2}$	15.5116	19.147	$\frac{7}{8}$	31.0232	76.589

## Circumferences and Areas of Circles

Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area
10	31.4159	78.540	16	50.2655	201.06	22	69.1150	380.13
$\frac{3}{8}$	31.8086	80.516	$\frac{1}{8}$	50.6382	204.22	$\frac{1}{8}$	69.5077	384.46
$\frac{1}{4}$	32.2013	82.516	$\frac{1}{4}$	51.0509	207.39	$\frac{1}{4}$	69.9004	388.82
$\frac{3}{8}$	32.5940	84.541	$\frac{3}{8}$	51.4436	210.60	$\frac{3}{8}$	70.2931	393.20
$\frac{1}{2}$	32.9867	86.590	$\frac{1}{2}$	51.8363	213.82	$\frac{1}{2}$	70.6858	397.61
$\frac{5}{8}$	33.3794	88.664	$\frac{5}{8}$	52.2290	217.08	$\frac{5}{8}$	71.0785	402.04
$\frac{3}{4}$	33.7721	90.763	$\frac{3}{4}$	52.6217	220.35	$\frac{3}{4}$	71.4712	406.49
$\frac{7}{8}$	34.1648	92.886	$\frac{7}{8}$	53.0144	223.65	$\frac{7}{8}$	71.8639	410.97
11	34.5575	95.033	17	53.4071	226.98	23	72.2566	415.48
$\frac{1}{8}$	34.9502	97.205	$\frac{1}{8}$	53.7998	230.33	$\frac{1}{8}$	72.6493	420.00
$\frac{1}{4}$	35.3429	99.402	$\frac{1}{4}$	54.1925	233.71	$\frac{1}{4}$	73.0420	424.56
$\frac{3}{8}$	35.7356	101.62	$\frac{3}{8}$	54.5852	237.10	$\frac{3}{8}$	73.4347	429.13
$\frac{1}{2}$	36.1283	103.87	$\frac{1}{2}$	54.9779	240.53	$\frac{1}{2}$	73.8274	433.74
$\frac{5}{8}$	36.5210	106.14	$\frac{5}{8}$	55.3706	243.98	$\frac{5}{8}$	74.2201	438.36
$\frac{3}{4}$	36.9137	108.43	$\frac{3}{4}$	55.7633	247.45	$\frac{3}{4}$	74.6128	443.01
$\frac{7}{8}$	37.3064	110.75	$\frac{7}{8}$	56.1560	250.95	$\frac{7}{8}$	75.0055	447.69
12	37.6991	113.10	18	56.5487	254.47	24	75.3982	452.39
$\frac{1}{8}$	38.0918	115.47	$\frac{1}{8}$	56.9414	258.02	$\frac{1}{8}$	75.7909	457.11
$\frac{1}{4}$	38.4845	117.86	$\frac{1}{4}$	57.3341	261.59	$\frac{1}{4}$	76.1836	461.86
$\frac{3}{8}$	38.8772	120.28	$\frac{3}{8}$	57.7268	265.18	$\frac{3}{8}$	76.5763	466.64
$\frac{1}{2}$	39.2699	122.72	$\frac{1}{2}$	58.1195	268.80	$\frac{1}{2}$	76.9690	471.44
$\frac{5}{8}$	39.6626	125.19	$\frac{5}{8}$	58.5122	272.45	$\frac{5}{8}$	77.3617	476.26
$\frac{3}{4}$	40.0553	127.68	$\frac{3}{4}$	58.9049	276.12	$\frac{3}{4}$	77.7544	481.11
$\frac{7}{8}$	40.4480	130.19	$\frac{7}{8}$	59.2976	279.81	$\frac{7}{8}$	78.1471	485.98
13	40.8407	132.73	19	59.6903	283.53	25	78.5398	490.87
$\frac{1}{8}$	41.2334	135.30	$\frac{1}{8}$	60.0830	287.27	$\frac{1}{8}$	78.9325	495.79
$\frac{1}{4}$	41.6261	137.89	$\frac{1}{4}$	60.4757	291.04	$\frac{1}{4}$	79.3252	500.74
$\frac{3}{8}$	42.0188	140.50	$\frac{3}{8}$	60.8684	294.83	$\frac{3}{8}$	79.7179	505.71
$\frac{1}{2}$	42.4115	143.14	$\frac{1}{2}$	61.2611	298.65	$\frac{1}{2}$	80.1106	510.71
$\frac{5}{8}$	42.8042	145.80	$\frac{5}{8}$	61.6538	302.49	$\frac{5}{8}$	80.5033	515.72
$\frac{3}{4}$	43.1969	148.49	$\frac{3}{4}$	62.0465	306.35	$\frac{3}{4}$	80.8960	520.77
$\frac{7}{8}$	43.5896	151.20	$\frac{7}{8}$	62.4392	310.24	$\frac{7}{8}$	81.2887	525.84
14	43.9823	153.94	20	62.8319	314.16	26	81.6814	530.93
$\frac{1}{8}$	44.3750	156.70	$\frac{1}{8}$	63.2246	318.10	$\frac{1}{8}$	82.0741	536.05
$\frac{1}{4}$	44.7677	159.48	$\frac{1}{4}$	63.6173	322.06	$\frac{1}{4}$	82.4668	541.19
$\frac{3}{8}$	45.1604	162.30	$\frac{3}{8}$	64.0100	326.05	$\frac{3}{8}$	82.8595	546.35
$\frac{1}{2}$	45.5531	165.13	$\frac{1}{2}$	64.4026	330.06	$\frac{1}{2}$	83.2522	551.55
$\frac{5}{8}$	45.9458	167.99	$\frac{5}{8}$	64.7953	334.10	$\frac{5}{8}$	83.6449	556.76
$\frac{3}{4}$	46.3385	170.87	$\frac{3}{4}$	65.1880	338.16	$\frac{3}{4}$	84.0376	562.00
$\frac{7}{8}$	46.7312	173.78	$\frac{7}{8}$	65.5807	342.25	$\frac{7}{8}$	84.4303	567.27
15	47.1239	176.71	21	65.9734	346.36	27	84.8230	572.56
$\frac{1}{8}$	47.5166	179.67	$\frac{1}{8}$	66.3661	350.50	$\frac{1}{8}$	85.2157	577.87
$\frac{1}{4}$	47.9093	182.65	$\frac{1}{4}$	66.7588	354.66	$\frac{1}{4}$	85.6084	583.21
$\frac{3}{8}$	48.3020	185.66	$\frac{3}{8}$	67.1515	358.84	$\frac{3}{8}$	86.0011	588.57
$\frac{1}{2}$	48.6947	188.69	$\frac{1}{2}$	67.5442	363.05	$\frac{1}{2}$	86.3938	593.96
$\frac{5}{8}$	49.0874	191.75	$\frac{5}{8}$	67.9369	367.28	$\frac{5}{8}$	86.7865	599.37
$\frac{3}{4}$	49.4801	194.83	$\frac{3}{4}$	68.3296	371.54	$\frac{3}{4}$	87.1792	604.81
$\frac{7}{8}$	49.8728	197.93	$\frac{7}{8}$	68.7223	375.83	$\frac{7}{8}$	87.5719	610.27

Cumferences and Areas of Circles

Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area
28	87.9646	615.75	34	106.814	907.92	40	125.664	1256.6
$\frac{1}{8}$	88.3573	621.26	$\frac{1}{8}$	107.207	914.61	$\frac{1}{8}$	126.056	1264.5
$\frac{1}{4}$	88.7500	626.80	$\frac{1}{4}$	107.600	921.32	$\frac{1}{4}$	126.449	1272.4
$\frac{3}{8}$	89.1427	632.36	$\frac{3}{8}$	107.992	928.06	$\frac{3}{8}$	126.842	1280.3
$\frac{1}{2}$	89.5354	637.94	$\frac{1}{2}$	108.385	934.82	$\frac{1}{2}$	127.235	1288.2
$\frac{5}{8}$	89.9281	643.55	$\frac{5}{8}$	108.778	941.61	$\frac{5}{8}$	127.627	1296.2
$\frac{3}{4}$	90.3208	649.18	$\frac{3}{4}$	109.170	948.42	$\frac{3}{4}$	128.020	1304.2
$\frac{7}{8}$	90.7135	654.84	$\frac{7}{8}$	109.563	955.25	$\frac{7}{8}$	128.413	1312.2
29	91.1062	660.52	35	109.956	962.11	41	128.805	1320.3
$\frac{1}{8}$	91.4989	666.23	$\frac{1}{8}$	110.348	969.00	$\frac{1}{8}$	129.198	1328.3
$\frac{1}{4}$	91.8916	671.96	$\frac{1}{4}$	110.741	975.91	$\frac{1}{4}$	129.591	1336.4
$\frac{3}{8}$	92.2843	677.71	$\frac{3}{8}$	111.134	982.84	$\frac{3}{8}$	129.983	1344.5
$\frac{1}{2}$	92.6770	683.49	$\frac{1}{2}$	111.527	989.80	$\frac{1}{2}$	130.376	1352.7
$\frac{5}{8}$	93.0697	689.30	$\frac{5}{8}$	111.919	996.78	$\frac{5}{8}$	130.769	1360.8
$\frac{3}{4}$	93.4624	695.13	$\frac{3}{4}$	112.312	1003.8	$\frac{3}{4}$	131.161	1369.0
$\frac{7}{8}$	93.8551	700.98	$\frac{7}{8}$	112.705	1010.8	$\frac{7}{8}$	131.554	1377.2
30	94.2478	706.86	36	113.097	1017.9	42	131.947	1385.4
$\frac{1}{8}$	94.6405	712.76	$\frac{1}{8}$	113.490	1025.0	$\frac{1}{8}$	132.340	1393.7
$\frac{1}{4}$	95.0332	718.69	$\frac{1}{4}$	113.883	1032.1	$\frac{1}{4}$	132.732	1402.0
$\frac{3}{8}$	95.4259	724.64	$\frac{3}{8}$	114.275	1039.2	$\frac{3}{8}$	133.125	1410.3
$\frac{1}{2}$	95.8186	730.62	$\frac{1}{2}$	114.668	1046.3	$\frac{1}{2}$	133.518	1418.6
$\frac{5}{8}$	96.2113	736.62	$\frac{5}{8}$	115.061	1053.5	$\frac{5}{8}$	133.910	1427.0
$\frac{3}{4}$	96.6040	742.64	$\frac{3}{4}$	115.454	1060.7	$\frac{3}{4}$	134.303	1435.4
$\frac{7}{8}$	96.9967	748.69	$\frac{7}{8}$	115.846	1068.0	$\frac{7}{8}$	134.696	1443.8
31	97.3894	754.77	37	116.239	1075.2	43	135.088	1452.2
$\frac{1}{8}$	97.7821	760.87	$\frac{1}{8}$	116.632	1082.5	$\frac{1}{8}$	135.481	1460.7
$\frac{1}{4}$	98.1748	766.99	$\frac{1}{4}$	117.024	1089.8	$\frac{1}{4}$	135.874	1469.1
$\frac{3}{8}$	98.5675	773.14	$\frac{3}{8}$	117.417	1097.1	$\frac{3}{8}$	136.267	1477.6
$\frac{1}{2}$	98.9602	779.31	$\frac{1}{2}$	117.810	1104.5	$\frac{1}{2}$	136.659	1486.2
$\frac{5}{8}$	99.3529	785.51	$\frac{5}{8}$	118.202	1111.8	$\frac{5}{8}$	137.052	1494.7
$\frac{3}{4}$	99.7456	791.73	$\frac{3}{4}$	118.596	1119.2	$\frac{3}{4}$	137.445	1503.3
$\frac{7}{8}$	100.138	797.98	$\frac{7}{8}$	118.988	1126.7	$\frac{7}{8}$	137.837	1511.9
32	100.531	804.25	38	119.381	1134.1	44	138.230	1520.5
$\frac{1}{8}$	100.924	810.54	$\frac{1}{8}$	119.773	1141.6	$\frac{1}{8}$	138.623	1529.2
$\frac{1}{4}$	101.316	816.86	$\frac{1}{4}$	120.166	1149.1	$\frac{1}{4}$	139.015	1537.9
$\frac{3}{8}$	101.709	823.21	$\frac{3}{8}$	120.559	1156.6	$\frac{3}{8}$	139.408	1546.6
$\frac{1}{2}$	102.102	829.58	$\frac{1}{2}$	120.951	1164.2	$\frac{1}{2}$	139.801	1555.3
$\frac{5}{8}$	102.494	835.97	$\frac{5}{8}$	121.344	1171.7	$\frac{5}{8}$	140.194	1564.0
$\frac{3}{4}$	102.887	842.39	$\frac{3}{4}$	121.737	1179.3	$\frac{3}{4}$	140.586	1572.8
$\frac{7}{8}$	103.280	848.83	$\frac{7}{8}$	122.129	1186.9	$\frac{7}{8}$	140.979	1581.6
33	103.673	855.30	39	122.522	1194.6	45	141.372	1590.4
$\frac{1}{8}$	104.065	861.79	$\frac{1}{8}$	122.915	1202.3	$\frac{1}{8}$	141.764	1599.3
$\frac{1}{4}$	104.458	868.31	$\frac{1}{4}$	123.308	1210.0	$\frac{1}{4}$	142.157	1608.2
$\frac{3}{8}$	104.851	874.85	$\frac{3}{8}$	123.700	1217.7	$\frac{3}{8}$	142.550	1617.0
$\frac{1}{2}$	105.243	881.41	$\frac{1}{2}$	124.093	1225.4	$\frac{1}{2}$	142.942	1626.0
$\frac{5}{8}$	105.636	888.00	$\frac{5}{8}$	124.486	1233.2	$\frac{5}{8}$	143.335	1634.9
$\frac{3}{4}$	106.029	894.62	$\frac{3}{4}$	124.878	1241.0	$\frac{3}{4}$	143.728	1643.9
$\frac{7}{8}$	106.421	901.26	$\frac{7}{8}$	125.271	1248.8	$\frac{7}{8}$	144.121	1652.9

## Circumferences and Areas of Circles

Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area
46	144.513	1661.9	52	163.363	2123.7	58	182.212	2642.1
$\frac{1}{8}$	144.906	1670.9	$\frac{1}{8}$	163.756	2133.9	$\frac{1}{8}$	182.605	2653.5
$\frac{1}{4}$	145.299	1680.0	$\frac{1}{4}$	164.148	2144.2	$\frac{1}{4}$	182.998	2664.9
$\frac{3}{8}$	145.691	1689.1	$\frac{3}{8}$	164.541	2154.5	$\frac{3}{8}$	183.390	2676.4
$\frac{1}{2}$	146.084	1698.2	$\frac{1}{2}$	164.934	2164.8	$\frac{1}{2}$	183.783	2687.8
$\frac{5}{8}$	146.477	1707.4	$\frac{5}{8}$	165.326	2175.1	$\frac{5}{8}$	184.176	2699.3
$\frac{3}{4}$	146.869	1716.5	$\frac{3}{4}$	165.719	2185.4	$\frac{3}{4}$	184.569	2710.9
$\frac{7}{8}$	147.262	1725.7	$\frac{7}{8}$	166.112	2195.8	$\frac{7}{8}$	184.961	2722.4
47	147.655	1734.9	53	166.504	2206.2	59	185.354	2734.0
$\frac{1}{8}$	148.048	1744.2	$\frac{1}{8}$	166.897	2216.6	$\frac{1}{8}$	185.747	2745.6
$\frac{1}{4}$	148.440	1753.5	$\frac{1}{4}$	167.290	2227.0	$\frac{1}{4}$	186.139	2757.2
$\frac{3}{8}$	148.833	1762.7	$\frac{3}{8}$	167.683	2237.5	$\frac{3}{8}$	186.532	2768.8
$\frac{1}{2}$	149.226	1772.1	$\frac{1}{2}$	168.075	2248.0	$\frac{1}{2}$	186.925	2780.5
$\frac{5}{8}$	149.618	1781.4	$\frac{5}{8}$	168.468	2258.5	$\frac{5}{8}$	187.317	2792.2
$\frac{3}{4}$	150.011	1790.8	$\frac{3}{4}$	168.861	2269.1	$\frac{3}{4}$	187.710	2803.9
$\frac{7}{8}$	150.404	1800.1	$\frac{7}{8}$	169.253	2279.6	$\frac{7}{8}$	188.103	2815.7
48	150.796	1809.6	54	169.646	2290.2	60	188.496	2827.4
$\frac{1}{8}$	151.189	1819.0	$\frac{1}{8}$	170.039	2300.8	$\frac{1}{8}$	188.888	2839.2
$\frac{1}{4}$	151.582	1828.5	$\frac{1}{4}$	170.431	2311.5	$\frac{1}{4}$	189.281	2851.0
$\frac{3}{8}$	151.975	1837.9	$\frac{3}{8}$	170.824	2322.1	$\frac{3}{8}$	189.674	2862.9
$\frac{1}{2}$	152.367	1847.5	$\frac{1}{2}$	171.217	2332.8	$\frac{1}{2}$	190.066	2874.8
$\frac{5}{8}$	152.760	1857.0	$\frac{5}{8}$	171.609	2343.5	$\frac{5}{8}$	190.459	2886.6
$\frac{3}{4}$	153.153	1866.5	$\frac{3}{4}$	172.002	2354.3	$\frac{3}{4}$	190.852	2898.6
$\frac{7}{8}$	153.545	1876.1	$\frac{7}{8}$	172.395	2365.0	$\frac{7}{8}$	191.244	2910.5
49	153.938	1885.7	55	172.788	2375.8	61	191.637	2922.5
$\frac{1}{8}$	154.331	1895.4	$\frac{1}{8}$	173.180	2386.6	$\frac{1}{8}$	192.030	2934.5
$\frac{1}{4}$	154.723	1905.0	$\frac{1}{4}$	173.573	2397.5	$\frac{1}{4}$	192.423	2946.5
$\frac{3}{8}$	155.116	1914.7	$\frac{3}{8}$	173.966	2408.3	$\frac{3}{8}$	192.815	2958.5
$\frac{1}{2}$	155.509	1924.4	$\frac{1}{2}$	174.358	2419.2	$\frac{1}{2}$	193.208	2970.6
$\frac{5}{8}$	155.902	1934.2	$\frac{5}{8}$	174.751	2430.1	$\frac{5}{8}$	193.601	2982.7
$\frac{3}{4}$	156.294	1943.9	$\frac{3}{4}$	175.144	2441.1	$\frac{3}{4}$	193.993	2994.8
$\frac{7}{8}$	156.687	1953.7	$\frac{7}{8}$	175.536	2452.0	$\frac{7}{8}$	194.386	3006.9
50	157.080	1963.5	56	175.929	2463.0	62	194.779	3019.1
$\frac{1}{8}$	157.472	1973.3	$\frac{1}{8}$	176.322	2474.0	$\frac{1}{8}$	195.171	3031.3
$\frac{1}{4}$	157.865	1983.2	$\frac{1}{4}$	176.715	2485.0	$\frac{1}{4}$	195.564	3043.5
$\frac{3}{8}$	158.258	1993.1	$\frac{3}{8}$	177.107	2496.1	$\frac{3}{8}$	195.957	3055.7
$\frac{1}{2}$	158.650	2003.0	$\frac{1}{2}$	177.500	2507.2	$\frac{1}{2}$	196.350	3068.0
$\frac{5}{8}$	159.043	2012.9	$\frac{5}{8}$	177.893	2518.3	$\frac{5}{8}$	196.742	3080.3
$\frac{3}{4}$	159.436	2022.8	$\frac{3}{4}$	178.285	2529.4	$\frac{3}{4}$	197.135	3092.6
$\frac{7}{8}$	159.829	2032.8	$\frac{7}{8}$	178.678	2540.6	$\frac{7}{8}$	197.528	3104.9
51	160.221	2042.8	57	179.071	2551.8	63	197.920	3117.2
$\frac{1}{8}$	160.614	2052.8	$\frac{1}{8}$	179.463	2563.0	$\frac{1}{8}$	198.313	3129.6
$\frac{1}{4}$	161.007	2062.9	$\frac{1}{4}$	179.856	2574.2	$\frac{1}{4}$	198.706	3142.0
$\frac{3}{8}$	161.399	2073.0	$\frac{3}{8}$	180.249	2585.4	$\frac{3}{8}$	199.098	3154.5
$\frac{1}{2}$	161.792	2083.1	$\frac{1}{2}$	180.642	2596.7	$\frac{1}{2}$	199.491	3166.9
$\frac{5}{8}$	162.185	2093.2	$\frac{5}{8}$	181.034	2608.0	$\frac{5}{8}$	199.884	3179.4
$\frac{3}{4}$	162.577	2103.3	$\frac{3}{4}$	181.427	2619.4	$\frac{3}{4}$	200.277	3191.9
$\frac{7}{8}$	162.970	2113.5	$\frac{7}{8}$	181.820	2630.7	$\frac{7}{8}$	200.669	3204.4

Circumferences and Areas of Circles

Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area
64	201.062	3217.0	70	219.911	3848.5	76	238.761	4536.5
$\frac{1}{8}$	201.455	3229.6	$\frac{1}{8}$	220.304	3862.2	$\frac{1}{8}$	239.154	4551.4
$\frac{1}{4}$	201.847	3242.2	$\frac{1}{4}$	220.697	3876.0	$\frac{1}{4}$	239.546	4566.4
$\frac{3}{8}$	202.240	3254.8	$\frac{3}{8}$	221.090	3889.8	$\frac{3}{8}$	239.939	4581.3
$\frac{1}{2}$	202.633	3267.5	$\frac{1}{2}$	221.482	3903.6	$\frac{1}{2}$	240.332	4596.3
$\frac{5}{8}$	203.025	3280.1	$\frac{5}{8}$	221.875	3917.5	$\frac{5}{8}$	240.725	4611.4
$\frac{3}{4}$	203.418	3292.8	$\frac{3}{4}$	222.268	3931.4	$\frac{3}{4}$	241.117	4626.4
$\frac{7}{8}$	203.811	3305.6	$\frac{7}{8}$	222.660	3945.3	$\frac{7}{8}$	241.510	4641.5
65	204.204	3318.3	71	223.053	3959.2	77	241.903	4656.6
$\frac{1}{8}$	204.596	3331.1	$\frac{1}{8}$	223.446	3973.1	$\frac{1}{8}$	242.295	4671.8
$\frac{1}{4}$	204.989	3343.9	$\frac{1}{4}$	223.838	3987.1	$\frac{1}{4}$	242.688	4686.9
$\frac{3}{8}$	205.382	3356.7	$\frac{3}{8}$	224.231	4001.1	$\frac{3}{8}$	243.081	4702.1
$\frac{1}{2}$	205.774	3369.6	$\frac{1}{2}$	224.624	4015.2	$\frac{1}{2}$	243.473	4717.3
$\frac{5}{8}$	206.167	3382.4	$\frac{5}{8}$	225.017	4029.2	$\frac{5}{8}$	243.866	4732.5
$\frac{3}{4}$	206.560	3395.3	$\frac{3}{4}$	225.409	4043.3	$\frac{3}{4}$	244.259	4747.8
$\frac{7}{8}$	206.952	3408.2	$\frac{7}{8}$	225.802	4057.4	$\frac{7}{8}$	244.652	4763.1
66	207.345	3421.2	72	226.195	4071.5	78	245.044	4778.4
$\frac{1}{8}$	207.738	3434.2	$\frac{1}{8}$	226.587	4085.7	$\frac{1}{8}$	245.437	4793.7
$\frac{1}{4}$	208.131	3447.2	$\frac{1}{4}$	226.980	4099.8	$\frac{1}{4}$	245.830	4809.0
$\frac{3}{8}$	208.523	3460.2	$\frac{3}{8}$	227.373	4114.0	$\frac{3}{8}$	246.222	4824.4
$\frac{1}{2}$	208.916	3473.2	$\frac{1}{2}$	227.765	4128.2	$\frac{1}{2}$	246.615	4839.8
$\frac{5}{8}$	209.309	3486.3	$\frac{5}{8}$	228.158	4142.5	$\frac{5}{8}$	247.008	4855.2
$\frac{3}{4}$	209.701	3499.4	$\frac{3}{4}$	228.551	4156.8	$\frac{3}{4}$	247.400	4870.7
$\frac{7}{8}$	210.094	3512.5	$\frac{7}{8}$	228.944	4171.1	$\frac{7}{8}$	247.793	4886.2
67	210.487	3525.7	73	229.336	4185.4	79	248.186	4901.7
$\frac{1}{8}$	210.879	3538.8	$\frac{1}{8}$	229.729	4199.7	$\frac{1}{8}$	248.579	4917.2
$\frac{1}{4}$	211.272	3552.0	$\frac{1}{4}$	230.122	4214.1	$\frac{1}{4}$	248.971	4932.7
$\frac{3}{8}$	211.665	3565.2	$\frac{3}{8}$	230.514	4228.5	$\frac{3}{8}$	249.364	4948.3
$\frac{1}{2}$	212.058	3578.5	$\frac{1}{2}$	230.907	4242.9	$\frac{1}{2}$	249.757	4963.9
$\frac{5}{8}$	212.450	3591.7	$\frac{5}{8}$	231.300	4257.4	$\frac{5}{8}$	250.149	4979.5
$\frac{3}{4}$	212.843	3605.0	$\frac{3}{4}$	231.692	4271.8	$\frac{3}{4}$	250.542	4995.2
$\frac{7}{8}$	213.236	3618.3	$\frac{7}{8}$	232.085	4286.3	$\frac{7}{8}$	250.935	5010.9
68	213.628	3631.7	74	232.478	4300.8	80	251.327	5026.5
$\frac{1}{8}$	214.021	3645.0	$\frac{1}{8}$	232.871	4315.4	$\frac{1}{8}$	251.720	5042.3
$\frac{1}{4}$	214.414	3658.4	$\frac{1}{4}$	233.263	4329.9	$\frac{1}{4}$	252.113	5058.0
$\frac{3}{8}$	214.806	3671.8	$\frac{3}{8}$	233.656	4344.5	$\frac{3}{8}$	252.506	5073.8
$\frac{1}{2}$	215.199	3685.3	$\frac{1}{2}$	234.049	4359.2	$\frac{1}{2}$	252.898	5089.6
$\frac{5}{8}$	215.592	3698.7	$\frac{5}{8}$	234.441	4373.8	$\frac{5}{8}$	253.291	5105.4
$\frac{3}{4}$	215.984	3712.2	$\frac{3}{4}$	234.834	4388.5	$\frac{3}{4}$	253.684	5121.2
$\frac{7}{8}$	216.377	3725.7	$\frac{7}{8}$	235.227	4403.1	$\frac{7}{8}$	254.076	5137.1
69	216.770	3739.3	75	235.619	4417.9	81	254.469	5153.0
$\frac{1}{8}$	217.163	3752.8	$\frac{1}{8}$	236.012	4432.6	$\frac{1}{8}$	254.862	5168.9
$\frac{1}{4}$	217.555	3766.4	$\frac{1}{4}$	236.405	4447.4	$\frac{1}{4}$	255.254	5184.9
$\frac{3}{8}$	217.948	3780.0	$\frac{3}{8}$	236.798	4462.2	$\frac{3}{8}$	255.647	5200.8
$\frac{1}{2}$	218.341	3793.7	$\frac{1}{2}$	237.190	4477.0	$\frac{1}{2}$	256.040	5216.8
$\frac{5}{8}$	218.733	3807.3	$\frac{5}{8}$	237.583	4491.8	$\frac{5}{8}$	256.433	5232.8
$\frac{3}{4}$	219.126	3821.0	$\frac{3}{4}$	237.976	4506.7	$\frac{3}{4}$	256.825	5248.9
$\frac{7}{8}$	219.519	3834.7	$\frac{7}{8}$	238.368	4521.5	$\frac{7}{8}$	257.218	5264.9



## Circumferences and Areas of Circles

Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area
82	257.611	5281.0	88	276.460	6082.1	94	295.310	6939.8
$\frac{3}{8}$	258.003	5297.1	$\frac{3}{8}$	276.853	6099.4	$\frac{3}{8}$	295.702	6958.2
$\frac{1}{4}$	258.396	5313.3	$\frac{1}{4}$	277.246	6116.7	$\frac{1}{4}$	296.095	6976.7
$\frac{5}{8}$	258.789	5329.4	$\frac{5}{8}$	277.638	6134.1	$\frac{5}{8}$	296.488	6995.3
$\frac{1}{2}$	259.181	5345.6	$\frac{1}{2}$	278.031	6151.4	$\frac{1}{2}$	296.881	7013.8
$\frac{5}{8}$	259.574	5361.8	$\frac{5}{8}$	278.424	6168.8	$\frac{5}{8}$	297.273	7032.4
$\frac{3}{4}$	259.967	5378.1	$\frac{3}{4}$	278.816	6186.2	$\frac{3}{4}$	297.666	7051.0
$\frac{7}{8}$	260.359	5394.3	$\frac{7}{8}$	279.209	6203.7	$\frac{7}{8}$	298.059	7069.6
83	260.752	5410.6	89	279.602	6221.1	95	298.451	7088.2
$\frac{3}{8}$	261.145	5426.9	$\frac{3}{8}$	279.994	6238.6	$\frac{3}{8}$	298.844	7106.9
$\frac{1}{4}$	261.538	5443.3	$\frac{1}{4}$	280.387	6256.1	$\frac{1}{4}$	299.237	7125.6
$\frac{5}{8}$	261.930	5459.6	$\frac{5}{8}$	280.780	6273.7	$\frac{5}{8}$	299.629	7144.3
$\frac{1}{2}$	262.323	5476.0	$\frac{1}{2}$	281.173	6291.2	$\frac{1}{2}$	300.022	7163.0
$\frac{5}{8}$	262.716	5492.4	$\frac{5}{8}$	281.565	6308.8	$\frac{5}{8}$	300.415	7181.8
$\frac{3}{4}$	263.108	5508.8	$\frac{3}{4}$	281.958	6326.4	$\frac{3}{4}$	300.807	7200.6
$\frac{7}{8}$	263.501	5525.3	$\frac{7}{8}$	282.351	6344.1	$\frac{7}{8}$	301.200	7219.4
84	263.894	5541.8	90	282.743	6361.7	96	301.593	7238.2
$\frac{3}{8}$	264.286	5558.3	$\frac{3}{8}$	283.136	6379.4	$\frac{3}{8}$	301.986	7257.1
$\frac{1}{4}$	264.679	5574.8	$\frac{1}{4}$	283.529	6397.1	$\frac{1}{4}$	302.378	7276.0
$\frac{5}{8}$	265.072	5591.4	$\frac{5}{8}$	283.921	6414.9	$\frac{5}{8}$	302.771	7294.9
$\frac{1}{2}$	265.465	5607.9	$\frac{1}{2}$	284.314	6432.6	$\frac{1}{2}$	303.164	7313.8
$\frac{5}{8}$	265.857	5624.5	$\frac{5}{8}$	284.707	6450.4	$\frac{5}{8}$	303.556	7332.8
$\frac{3}{4}$	266.250	5641.2	$\frac{3}{4}$	285.100	6468.2	$\frac{3}{4}$	303.949	7351.8
$\frac{7}{8}$	266.643	5657.8	$\frac{7}{8}$	285.492	6486.0	$\frac{7}{8}$	304.342	7370.8
85	267.035	5674.5	91	285.885	6503.9	97	304.734	7389.8
$\frac{3}{8}$	267.428	5691.2	$\frac{3}{8}$	286.278	6521.8	$\frac{3}{8}$	305.127	7408.9
$\frac{1}{4}$	267.821	5707.9	$\frac{1}{4}$	286.670	6539.7	$\frac{1}{4}$	305.520	7428.0
$\frac{5}{8}$	268.213	5724.7	$\frac{5}{8}$	287.063	6557.6	$\frac{5}{8}$	305.913	7447.1
$\frac{1}{2}$	268.606	5741.5	$\frac{1}{2}$	287.456	6575.5	$\frac{1}{2}$	306.305	7466.2
$\frac{5}{8}$	268.999	5758.3	$\frac{5}{8}$	287.848	6593.5	$\frac{5}{8}$	306.698	7485.3
$\frac{3}{4}$	269.392	5775.1	$\frac{3}{4}$	288.241	6611.5	$\frac{3}{4}$	307.091	7504.5
$\frac{7}{8}$	269.784	5791.9	$\frac{7}{8}$	288.634	6629.6	$\frac{7}{8}$	307.483	7523.7
86	270.177	5808.8	92	289.027	6647.6	98	307.876	7543.0
$\frac{3}{8}$	270.570	5825.7	$\frac{3}{8}$	289.419	6665.7	$\frac{3}{8}$	308.269	7562.2
$\frac{1}{4}$	270.962	5842.6	$\frac{1}{4}$	289.812	6683.8	$\frac{1}{4}$	308.661	7581.5
$\frac{5}{8}$	271.355	5859.6	$\frac{5}{8}$	290.205	6701.9	$\frac{5}{8}$	309.054	7600.8
$\frac{1}{2}$	271.748	5876.5	$\frac{1}{2}$	290.597	6720.1	$\frac{1}{2}$	309.447	7620.1
$\frac{5}{8}$	272.140	5893.5	$\frac{5}{8}$	290.990	6738.2	$\frac{5}{8}$	309.840	7639.5
$\frac{3}{4}$	272.533	5910.6	$\frac{3}{4}$	291.383	6756.4	$\frac{3}{4}$	310.232	7658.9
$\frac{7}{8}$	272.926	5927.6	$\frac{7}{8}$	291.775	6774.7	$\frac{7}{8}$	310.625	7678.3
87	273.319	5944.7	93	292.168	6792.9	99	311.018	7697.7
$\frac{3}{8}$	273.711	5961.8	$\frac{3}{8}$	292.561	6811.2	$\frac{3}{8}$	311.410	7717.1
$\frac{1}{4}$	274.104	5978.9	$\frac{1}{4}$	292.954	6829.5	$\frac{1}{4}$	311.803	7736.6
$\frac{5}{8}$	274.497	5996.0	$\frac{5}{8}$	293.346	6847.8	$\frac{5}{8}$	312.196	7756.1
$\frac{1}{2}$	274.889	6013.2	$\frac{1}{2}$	293.739	6866.1	$\frac{1}{2}$	312.588	7775.6
$\frac{5}{8}$	275.282	6030.4	$\frac{5}{8}$	294.132	6884.5	$\frac{5}{8}$	312.981	7795.2
$\frac{3}{4}$	275.675	6047.6	$\frac{3}{4}$	294.524	6902.9	$\frac{3}{4}$	313.374	7814.8
$\frac{7}{8}$	276.067	6064.9	$\frac{7}{8}$	294.917	6921.3	$\frac{7}{8}$	313.767	7834.4



Circumferences and Areas of Circles

Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area
100	314.16	7,854.0	150	471.24	17,671.5	200	628.32	31,415.9
101	317.30	8,011.8	151	474.38	17,907.9	201	631.46	31,730.9
102	320.44	8,171.3	152	477.52	18,145.8	202	634.60	32,047.4
103	323.58	8,332.3	153	480.66	18,385.4	203	637.74	32,365.5
104	326.73	8,494.9	154	483.81	18,626.5	204	640.88	32,685.1
105	329.87	8,659.0	155	486.95	18,869.2	205	644.03	33,006.4
106	333.01	8,824.7	156	490.09	19,113.4	206	647.17	33,329.2
107	336.15	8,992.0	157	493.23	19,359.3	207	650.31	33,653.5
108	339.29	9,160.9	158	496.37	19,606.7	208	653.45	33,979.5
109	342.43	9,331.3	159	499.51	19,855.7	209	656.59	34,307.0
110	345.58	9,503.3	160	502.65	20,106.2	210	659.73	34,636.1
111	348.72	9,676.9	161	505.80	20,358.3	211	662.88	34,966.7
112	351.86	9,852.0	162	508.94	20,612.0	212	666.02	35,298.9
113	355.00	10,028.7	163	512.08	20,867.2	213	669.16	35,632.7
114	358.14	10,207.0	164	515.22	21,124.1	214	672.30	35,968.1
115	361.28	10,386.9	165	518.36	21,382.5	215	675.44	36,305.0
116	364.42	10,568.3	166	521.50	21,642.4	216	678.58	36,643.5
117	367.57	10,751.3	167	524.65	21,904.0	217	681.73	36,983.6
118	370.71	10,935.9	168	527.79	22,167.1	218	684.87	37,325.3
119	373.85	11,122.0	169	530.93	22,431.8	219	688.01	37,668.5
120	376.99	11,309.7	170	534.07	22,698.0	220	691.15	38,013.3
121	380.13	11,499.0	171	537.21	22,965.8	221	694.29	38,359.6
122	383.27	11,689.9	172	540.35	23,235.2	222	697.43	38,707.6
123	386.42	11,882.3	173	543.50	23,506.2	223	700.58	39,057.1
124	389.56	12,076.3	174	546.64	23,778.7	224	703.72	39,408.1
125	392.70	12,271.8	175	549.78	24,052.8	225	706.86	39,760.8
126	395.84	12,469.0	176	552.92	24,328.5	226	710.00	40,115.0
127	398.98	12,667.7	177	556.06	24,605.7	227	713.14	40,470.8
128	402.12	12,868.0	178	559.20	24,884.6	228	716.28	40,828.1
129	405.27	13,069.8	179	562.35	25,164.9	229	719.42	41,187.1
130	408.41	13,273.2	180	565.49	25,446.9	230	722.57	41,547.6
131	411.55	13,478.2	181	568.63	25,730.4	231	725.71	41,909.6
132	414.69	13,684.8	182	571.77	26,015.5	232	728.85	42,273.3
133	417.83	13,892.9	183	574.91	26,302.2	233	731.99	42,638.5
134	420.97	14,102.6	184	578.05	26,590.4	234	735.13	43,005.3
135	424.12	14,313.9	185	581.19	26,880.3	235	738.27	43,373.6
136	427.26	14,526.7	186	584.34	27,171.6	236	741.42	43,743.5
137	430.40	14,741.1	187	587.48	27,464.6	237	744.56	44,115.0
138	433.54	14,957.1	188	590.62	27,759.1	238	747.70	44,488.1
139	436.68	15,174.7	189	593.76	28,055.2	239	750.84	44,862.7
140	439.82	15,393.8	190	596.90	28,352.9	240	753.98	45,238.9
141	442.96	15,614.5	191	600.04	28,652.1	241	757.12	45,616.7
142	446.11	15,836.8	192	603.19	28,952.9	242	760.27	45,996.1
143	449.25	16,060.6	193	606.33	29,255.3	243	763.41	46,377.0
144	452.39	16,286.0	194	609.47	29,559.2	244	766.55	46,759.5
145	455.53	16,513.7	195	612.61	29,864.8	245	769.69	47,143.5
146	458.67	16,741.5	196	615.75	30,171.9	246	772.83	47,529.2
147	461.81	16,971.7	197	618.89	30,480.5	247	775.97	47,916.4
148	464.96	17,203.4	198	622.04	30,790.7	248	779.11	48,305.1
149	468.10	17,436.6	199	625.18	31,102.6	249	782.26	48,695.5

## Circumferences and Areas of Circles

Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area
250	785.40	49,087.4	300	942.48	70,685.8	350	1099.56	96,211.3
251	788.54	49,480.9	301	945.62	71,157.9	351	1102.70	96,761.8
252	791.68	49,875.9	302	948.76	71,631.5	352	1105.84	97,314.0
253	794.82	50,272.6	303	951.90	72,106.6	353	1108.98	97,867.7
254	797.96	50,670.7	304	955.04	72,583.4	354	1112.12	98,423.0
255	801.11	51,070.5	305	958.19	73,061.7	355	1115.27	98,979.8
256	804.25	51,471.9	306	961.33	73,541.5	356	1118.41	99,538.2
257	807.39	51,874.8	307	964.47	74,023.0	357	1121.55	100,098
258	810.53	52,279.2	308	967.61	74,506.0	358	1124.69	100,660
259	813.67	52,685.3	309	970.75	74,990.6	359	1127.83	101,223
260	816.81	53,092.9	310	973.89	75,476.8	360	1130.97	101,788
261	819.96	53,502.1	311	977.04	75,964.5	361	1134.11	102,354
262	823.10	53,912.9	312	980.18	76,453.8	362	1137.26	102,922
263	826.24	54,325.2	313	983.32	76,944.7	363	1140.40	103,491
264	829.38	54,739.1	314	986.46	77,437.1	364	1143.54	104,062
265	832.52	55,154.6	315	989.60	77,931.1	365	1146.68	104,635
266	835.66	55,571.6	316	992.74	78,426.7	366	1149.82	105,209
267	838.81	55,990.2	317	995.88	78,923.9	367	1152.96	105,784
268	841.95	56,410.4	318	999.03	79,422.6	368	1156.11	106,362
269	845.09	56,832.2	319	1002.17	79,922.9	369	1159.25	106,941
270	848.23	57,255.5	320	1005.31	80,424.8	370	1162.39	107,521
271	851.37	57,680.4	321	1008.45	80,928.2	371	1165.53	108,103
272	854.51	58,106.9	322	1011.59	81,433.2	372	1168.67	108,687
273	857.65	58,534.9	323	1014.73	81,939.8	373	1171.81	109,272
274	860.80	58,964.6	324	1017.88	82,448.0	374	1174.96	109,858
275	863.94	59,395.7	325	1021.02	82,957.7	375	1178.10	110,447
276	867.08	59,828.5	326	1024.16	83,469.0	376	1181.24	111,036
277	870.22	60,262.8	327	1027.30	83,981.8	377	1184.38	111,628
278	873.36	60,698.7	328	1030.44	84,496.3	378	1187.52	112,221
279	876.50	61,136.2	329	1033.58	85,012.3	379	1190.66	112,815
280	879.65	61,575.2	330	1036.73	85,529.9	380	1193.81	113,411
281	882.79	62,015.8	331	1039.87	86,049.0	381	1196.95	114,009
282	885.93	62,458.0	332	1043.01	86,569.7	382	1200.09	114,608
283	889.07	62,901.8	333	1046.15	87,092.0	383	1203.23	115,209
284	892.21	63,347.1	334	1049.29	87,615.9	384	1206.37	115,812
285	895.35	63,794.0	335	1052.43	88,141.3	385	1209.51	116,416
286	898.50	64,242.4	336	1055.58	88,668.3	386	1212.65	117,021
287	901.64	64,692.5	337	1058.72	89,196.9	387	1215.80	117,628
288	904.78	65,144.1	338	1061.86	89,727.0	388	1218.94	118,237
289	907.92	65,597.2	339	1065.00	90,258.7	389	1222.08	118,847
290	911.06	66,052.0	340	1068.14	90,792.0	390	1225.22	119,459
291	914.20	66,508.3	341	1071.28	91,326.9	391	1228.36	120,072
292	917.35	66,966.2	342	1074.42	91,863.3	392	1231.50	120,687
293	920.49	67,425.6	343	1077.57	92,401.3	393	1234.65	121,304
294	923.63	67,886.7	344	1080.71	92,940.9	394	1237.79	121,922
295	926.77	68,349.3	345	1083.85	93,482.0	395	1240.93	122,542
296	929.91	68,813.4	346	1086.99	94,024.7	396	1244.07	123,163
297	933.05	69,279.2	347	1090.13	94,569.0	397	1247.21	123,786
298	936.19	69,746.5	348	1093.27	95,114.9	398	1250.35	124,410
299	939.34	70,215.4	349	1096.42	95,662.3	399	1253.50	125,036

Circumferences and Areas of Circles

Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area	Diam-eter	Circum-ference	Area
400	1256.64	125,664	450	1413.72	159,043	500	1570.80	196,350
401	1259.78	126,293	451	1416.86	159,751	501	1573.94	197,136
402	1262.92	126,923	452	1420.00	160,460	502	1577.08	197,923
403	1266.06	127,556	453	1423.14	161,171	503	1580.22	198,713
404	1269.20	128,190	454	1426.28	161,883	504	1583.36	199,504
405	1272.35	128,825	455	1429.42	162,597	505	1586.50	200,296
406	1275.49	129,462	456	1432.57	163,313	506	1589.65	201,090
407	1278.63	130,100	457	1435.71	164,030	507	1592.79	201,886
408	1281.77	130,741	458	1438.85	164,748	508	1595.93	202,683
409	1284.91	131,382	459	1441.99	165,468	509	1599.07	203,482
410	1288.05	132,025	460	1445.13	166,190	510	1602.21	204,282
411	1291.19	132,670	461	1448.27	166,914	511	1605.35	205,084
412	1294.34	133,317	462	1451.42	167,639	512	1608.50	205,887
413	1297.48	133,965	463	1454.56	168,365	513	1611.64	206,692
414	1300.62	134,614	464	1457.70	169,093	514	1614.78	207,499
415	1303.76	135,265	465	1460.84	169,823	515	1617.92	208,307
416	1306.90	135,918	466	1463.98	170,554	516	1621.06	209,117
417	1310.04	136,572	467	1467.12	171,287	517	1624.20	209,928
418	1313.19	137,228	468	1470.27	172,021	518	1627.35	210,741
419	1316.33	137,885	469	1473.41	172,757	519	1630.49	211,556
420	1319.47	138,544	470	1476.55	173,494	520	1633.63	212,372
421	1322.61	139,205	471	1479.69	174,234	521	1636.77	213,189
422	1325.75	139,867	472	1482.83	174,974	522	1639.91	214,008
423	1328.89	140,531	473	1485.97	175,716	523	1643.05	214,829
424	1332.04	141,196	474	1489.11	176,460	524	1646.20	215,651
425	1335.18	141,863	475	1492.26	177,205	525	1649.34	216,475
426	1338.32	142,531	476	1495.40	177,952	526	1652.48	217,301
427	1341.46	143,201	477	1498.54	178,701	527	1655.62	218,128
428	1344.60	143,872	478	1501.68	179,451	528	1658.76	218,956
429	1347.74	144,545	479	1504.82	180,203	529	1661.90	219,787
430	1350.88	145,220	480	1507.96	180,956	530	1665.04	220,618
431	1354.03	145,896	481	1511.11	181,711	531	1668.19	221,452
432	1357.17	146,574	482	1514.25	182,467	532	1671.33	222,287
433	1360.31	147,254	483	1517.39	183,225	533	1674.47	223,123
434	1363.45	147,934	484	1520.53	183,984	534	1677.61	223,961
435	1366.59	148,617	485	1523.67	184,745	535	1680.75	224,801
436	1369.73	149,301	486	1526.81	185,508	536	1683.89	225,642
437	1372.88	149,987	487	1529.96	186,272	537	1687.04	226,484
438	1376.02	150,674	488	1533.10	187,038	538	1690.18	227,329
439	1379.16	151,363	489	1536.24	187,805	539	1693.32	228,175
440	1382.30	152,053	490	1539.38	188,574	540	1696.46	229,022
441	1385.44	152,745	491	1542.52	189,345	541	1699.60	229,871
442	1388.58	153,439	492	1545.66	190,117	542	1702.74	230,722
443	1391.73	154,134	493	1548.81	190,890	543	1705.88	231,574
444	1394.87	154,830	494	1551.95	191,665	544	1709.03	232,428
445	1398.01	155,528	495	1555.09	192,442	545	1712.17	233,283
446	1401.15	156,228	496	1558.23	193,221	546	1715.31	234,140
447	1404.29	156,930	497	1561.37	194,000	547	1718.45	234,998
448	1407.43	157,633	498	1564.51	194,782	548	1721.59	235,858
449	1410.58	158,337	499	1567.65	195,565	549	1724.73	236,720

## Circumferences and Areas of Circles

Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area
550	1727.88	237,583	600	1884.96	282,743	650	2042.04	331,831
551	1731.02	238,448	601	1888.10	283,687	651	2045.18	332,853
552	1734.16	239,314	602	1891.24	284,631	652	2048.32	333,876
553	1737.30	240,182	603	1894.38	285,578	653	2051.46	334,901
554	1740.44	241,051	604	1897.52	286,526	654	2054.60	335,927
555	1743.58	241,922	605	1900.66	287,475	655	2057.74	336,955
556	1746.73	242,795	606	1903.81	288,426	656	2060.88	337,985
557	1749.87	243,669	607	1906.95	289,379	657	2064.03	339,016
558	1753.01	244,545	608	1910.09	290,333	658	2067.17	340,049
559	1756.15	245,422	609	1913.23	291,289	659	2070.31	341,083
560	1759.29	246,301	610	1916.37	292,247	660	2073.45	342,119
561	1762.43	247,181	611	1919.51	293,206	661	2076.59	343,157
562	1765.58	248,063	612	1922.65	294,166	662	2079.73	344,196
563	1768.72	248,947	613	1925.80	295,128	663	2082.88	345,237
564	1771.86	249,832	614	1928.94	296,092	664	2086.02	346,279
565	1775.00	250,719	615	1932.08	297,057	665	2089.16	347,323
566	1778.14	251,607	616	1935.22	298,024	666	2092.30	348,368
567	1781.28	252,497	617	1938.36	298,992	667	2095.44	349,415
568	1784.42	253,388	618	1941.50	299,962	668	2098.58	350,464
569	1787.57	254,281	619	1944.65	300,934	669	2101.73	351,514
570	1790.71	255,176	620	1947.79	301,907	670	2104.87	352,565
571	1793.85	256,072	621	1950.93	302,882	671	2108.01	353,618
572	1796.99	256,970	622	1954.07	303,858	672	2111.15	354,673
573	1800.13	257,869	623	1957.21	304,836	673	2114.29	355,730
574	1803.27	258,770	624	1960.35	305,815	674	2117.43	356,788
575	1806.42	259,672	625	1963.50	306,796	675	2120.58	357,847
576	1809.56	260,576	626	1966.64	307,779	676	2123.72	358,908
577	1812.70	261,482	627	1969.78	308,763	677	2126.86	359,971
578	1815.84	262,389	628	1972.92	309,748	678	2130.00	361,035
579	1818.98	263,298	629	1976.06	310,736	679	2133.14	362,101
580	1822.12	264,208	630	1979.20	311,725	680	2136.28	363,168
581	1825.27	265,120	631	1982.35	312,715	681	2139.42	364,237
582	1828.41	266,033	632	1985.49	313,707	682	2142.57	365,308
583	1831.55	266,948	633	1988.63	314,700	683	2145.71	366,380
584	1834.69	267,865	634	1991.77	315,696	684	2148.85	367,453
585	1837.83	268,783	635	1994.91	316,692	685	2151.99	368,528
586	1840.97	269,703	636	1998.05	317,690	686	2155.13	369,605
587	1844.11	270,624	637	2001.19	318,690	687	2158.27	370,684
588	1847.26	271,547	638	2004.34	319,692	688	2161.42	371,764
589	1850.40	272,471	639	2007.48	320,695	689	2164.56	372,845
590	1853.54	273,397	640	2010.62	321,699	690	2167.70	373,928
591	1856.68	274,325	641	2013.76	322,705	691	2170.84	375,013
592	1859.82	275,254	642	2016.90	323,713	692	2173.98	376,099
593	1862.96	276,184	643	2020.04	324,722	693	2177.12	377,187
594	1866.11	277,117	644	2023.19	325,733	694	2180.27	378,276
595	1869.25	278,051	645	2026.33	326,745	695	2183.41	379,367
596	1872.39	278,986	646	2029.47	327,759	696	2186.55	380,459
597	1875.53	279,923	647	2032.61	328,775	697	2189.69	381,554
598	1878.67	280,862	648	2035.75	329,792	698	2192.83	382,649
599	1881.81	281,802	649	2038.89	330,810	699	2195.97	383,746



Circumferences and Areas of Circles

Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area
700	2199.11	384,845	750	2356.19	441,786	800	2513.27	502,655
701	2202.26	385,945	751	2359.34	442,965	801	2516.42	503,912
702	2205.40	387,047	752	2362.48	444,146	802	2519.56	505,171
703	2208.54	388,151	753	2365.62	445,328	803	2522.70	506,432
704	2211.68	389,256	754	2368.76	446,511	804	2525.84	507,694
705	2214.82	390,363	755	2371.90	447,697	805	2528.98	508,958
706	2217.96	391,471	756	2375.04	448,883	806	2532.12	510,223
707	2221.11	392,580	757	2378.19	450,072	807	2535.27	511,490
708	2224.25	393,692	758	2381.33	451,262	808	2538.41	512,758
709	2227.39	394,805	759	2384.47	452,453	809	2541.55	514,028
710	2230.53	395,919	760	2387.61	453,646	810	2544.69	515,300
711	2233.67	397,035	761	2390.75	454,841	811	2547.83	516,573
712	2236.81	398,153	762	2393.89	456,037	812	2550.97	517,848
713	2239.96	399,272	763	2397.04	457,234	813	2554.11	519,124
714	2243.10	400,393	764	2400.18	458,434	814	2557.26	520,402
715	2246.24	401,515	765	2403.32	459,635	815	2560.40	521,681
716	2249.38	402,639	766	2406.46	460,837	816	2563.54	522,962
717	2252.52	403,765	767	2409.60	462,041	817	2566.68	524,245
718	2255.66	404,892	768	2412.74	463,247	818	2569.82	525,529
719	2258.81	406,020	769	2415.88	464,454	819	2572.96	526,814
720	2261.95	407,150	770	2419.03	465,663	820	2576.11	528,102
721	2265.09	408,282	771	2422.17	466,873	821	2579.25	529,391
722	2268.23	409,416	772	2425.31	468,085	822	2582.39	530,681
723	2271.37	410,550	773	2428.45	469,298	823	2585.53	531,973
724	2274.51	411,687	774	2431.59	470,513	824	2588.67	533,267
725	2277.65	412,825	775	2434.73	471,730	825	2591.81	534,562
726	2280.80	413,965	776	2437.88	472,948	826	2594.96	535,858
727	2283.94	415,106	777	2441.02	474,168	827	2598.10	537,157
728	2287.08	416,248	778	2444.16	475,389	828	2601.24	538,456
729	2290.22	417,393	779	2447.30	476,612	829	2604.38	539,758
730	2293.36	418,539	780	2450.44	477,836	830	2607.52	541,061
731	2296.50	419,686	781	2453.58	479,062	831	2610.66	542,365
732	2299.65	420,835	782	2456.73	480,290	832	2613.81	543,671
733	2302.79	421,986	783	2459.87	481,519	833	2616.95	544,979
734	2305.93	423,138	784	2463.01	482,750	834	2620.09	546,288
735	2309.07	424,292	785	2466.15	483,982	835	2623.23	547,599
736	2312.21	425,447	786	2469.29	485,216	836	2626.37	548,912
737	2315.35	426,604	787	2472.43	486,451	837	2629.51	550,226
738	2318.50	427,762	788	2475.58	487,688	838	2632.65	551,541
739	2321.64	428,922	789	2478.72	488,927	839	2635.80	552,858
740	2324.78	430,084	790	2481.86	490,167	840	2638.94	554,177
741	2327.92	431,247	791	2485.00	491,409	841	2642.08	555,497
742	2331.06	432,412	792	2488.14	492,652	842	2645.22	556,819
743	2334.20	433,578	793	2491.28	493,897	843	2648.36	558,142
744	2337.34	434,746	794	2494.42	495,143	844	2651.50	559,467
745	2340.49	435,916	795	2497.57	496,391	845	2654.65	560,794
746	2343.63	437,087	796	2500.71	497,641	846	2657.79	562,122
747	2346.77	438,259	797	2503.85	498,892	847	2660.93	563,452
748	2349.91	439,433	798	2506.99	500,145	848	2664.07	564,783
749	2353.05	440,609	799	2510.13	501,399	849	2667.21	566,116



## Circumferences and Areas of Circles

Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area	Diam- eter	Circum- ference	Area
850	2670.35	567,450	900	2827.43	636,173	950	2984.51	708,822
851	2673.50	568,786	901	2830.58	637,587	951	2987.65	710,315
852	2676.64	570,124	902	2833.72	639,003	952	2990.80	711,809
853	2679.78	571,463	903	2836.86	640,421	953	2993.94	713,306
854	2682.92	572,803	904	2840.00	641,840	954	2997.08	714,803
855	2686.06	574,146	905	2843.14	643,261	955	3000.22	716,303
856	2689.20	575,490	906	2846.28	644,683	956	3003.36	717,804
857	2692.34	576,835	907	2849.42	646,107	957	3006.50	719,306
858	2695.49	578,182	908	2852.57	647,533	958	3009.65	720,810
859	2698.63	579,530	909	2855.71	648,960	959	3012.79	722,316
860	2701.77	580,880	910	2858.85	650,388	960	3015.93	723,823
861	2704.91	582,232	911	2861.99	651,818	961	3019.07	725,332
862	2708.05	583,585	912	2865.13	653,250	962	3022.21	726,842
863	2711.19	584,940	913	2868.27	654,684	963	3025.35	728,354
864	2714.34	586,297	914	2871.42	656,118	964	3028.50	729,867
865	2717.48	587,655	915	2874.56	657,555	965	3031.64	731,382
866	2720.62	589,014	916	2877.70	658,993	966	3034.78	732,899
867	2723.76	590,375	917	2880.84	660,433	967	3037.92	734,417
868	2726.90	591,738	918	2883.98	661,874	968	3041.06	735,937
869	2730.04	593,102	919	2887.12	663,317	969	3044.20	737,458
870	2733.19	594,468	920	2890.27	664,761	970	3047.34	738,981
871	2736.33	595,835	921	2893.41	666,207	971	3050.49	740,506
872	2739.47	597,204	922	2896.55	667,654	972	3053.63	742,032
873	2742.61	598,575	923	2899.69	669,103	973	3056.77	743,559
874	2745.75	599,947	924	2902.83	670,554	974	3059.91	745,088
875	2748.89	601,320	925	2905.97	672,006	975	3063.05	746,619
876	2752.04	602,696	926	2909.11	673,460	976	3066.19	748,151
877	2755.18	604,073	927	2912.26	674,915	977	3069.34	749,685
878	2758.32	605,451	928	2915.40	676,372	978	3072.48	751,221
879	2761.46	606,831	929	2918.54	677,831	979	3075.62	752,758
880	2764.60	608,212	930	2921.68	679,291	980	3078.76	754,296
881	2767.74	609,595	931	2924.82	680,752	981	3081.90	755,837
882	2770.88	610,980	932	2927.96	682,216	982	3085.04	757,378
883	2774.03	612,366	933	2931.11	683,680	983	3088.19	758,922
884	2777.17	613,754	934	2934.25	685,147	984	3091.33	760,466
885	2780.31	615,143	935	2937.39	686,615	985	3094.47	762,013
886	2783.45	616,534	936	2940.53	688,084	986	3097.61	763,561
887	2786.59	617,927	937	2943.67	689,555	987	3100.75	765,111
888	2789.73	619,321	938	2946.81	691,028	988	3103.89	766,662
889	2792.88	620,717	939	2949.96	692,502	989	3107.04	768,214
890	2796.02	622,114	940	2953.10	693,978	990	3110.18	769,769
891	2799.16	623,513	941	2956.24	695,455	991	3113.32	771,325
892	2802.30	624,913	942	2959.38	696,934	992	3116.46	772,882
893	2805.44	626,315	943	2962.52	698,415	993	3119.60	774,441
894	2808.58	627,718	944	2965.66	699,897	994	3122.74	776,002
895	2811.73	629,124	945	2968.81	701,380	995	3125.88	777,564
896	2814.87	630,530	946	2971.95	702,865	996	3129.03	779,128
897	2818.01	631,938	947	2975.09	704,352	997	3132.17	780,693
898	2821.15	633,348	948	2978.23	705,840	998	3135.31	782,260
899	2824.29	634,760	949	2981.37	707,330	999	3138.45	783,828

0°

Natural Trigonometric Functions

179°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.00000	1.0000	0.00000	Infinite	1.0000	Infinite	0.00000	1.00000	60
1	.00029	.0000	0.00029	3437.7	.0000	3437.7	.00000	0.99971	59
2	.00058	.0000	0.00058	1718.9	.0000	1718.9	.00000	.99942	58
3	.00087	.0000	0.00087	1145.9	.0000	1145.9	.00000	.99913	57
4	.00116	.0000	0.00116	859.44	.0000	859.44	.00000	.99884	56
5	0.00145	1.0000	0.00145	687.55	1.0000	687.55	0.00000	0.99854	55
6	.00174	.0000	0.00174	572.96	.0000	572.96	.00000	.99825	54
7	.00204	.0000	.00204	491.11	.0000	491.11	.00000	.99796	53
8	.00233	.0000	.00233	429.72	.0000	429.72	.00000	.99767	52
9	.00262	.0000	.00262	381.97	.0000	381.97	.00000	.99738	51
10	0.00291	0.99999	0.00291	343.77	1.00000	343.77	0.00000	0.99709	50
11	.00320	.99999	.00320	312.52	.0000	312.52	.00000	.99680	49
12	.00349	.99999	.00349	286.48	.0000	286.48	.00001	.99651	48
13	.00378	.99999	.00378	264.44	.0000	264.44	.00001	.99622	47
14	.00407	.99999	.00407	245.55	.0000	245.55	.00001	.99593	46
15	0.00436	0.99999	0.00436	229.18	1.0000	229.18	0.00001	0.99564	45
16	.00465	.99999	.00465	214.86	.0000	214.86	.00001	.99534	44
17	.00494	.99999	.00494	202.22	.0000	202.22	.00001	.99505	43
18	.00524	.99999	.00524	190.98	.0000	190.99	.00001	.99476	42
19	.00553	.99998	.00553	180.93	.0000	180.93	.00001	.99447	41
20	0.00582	0.99998	0.00582	171.88	1.0000	171.89	0.00002	0.99418	40
21	.00611	.99998	.00611	163.70	.0000	163.70	.00002	.99389	39
22	.00640	.99998	.00640	156.26	.0000	156.26	.00002	.99360	38
23	.00669	.99998	.00669	149.46	.0000	149.47	.00002	.99331	37
24	.00698	.99997	.00698	143.24	.0000	143.24	.00002	.99302	36
25	0.00727	0.99997	0.00727	137.51	1.0000	137.51	0.00003	0.99273	35
26	.00756	.99997	.00756	132.22	.0000	132.22	.00003	.99244	34
27	.00785	.99997	.00785	127.32	.0000	127.32	.00003	.99215	33
28	.00814	.99997	.00814	122.77	.0000	122.78	.00003	.99185	32
29	.00843	.99996	.00844	118.54	.0000	118.54	.00003	.99156	31
30	0.00873	0.99996	0.00873	114.59	1.0000	114.59	0.00004	0.99127	30
31	.00902	.99996	.00902	110.89	.0000	110.90	.00004	.99098	29
32	.00931	.99996	.00931	107.43	.0000	107.43	.00004	.99069	28
33	.00960	.99995	.00960	104.17	.0000	104.17	.00005	.99040	27
34	.00989	.99995	.00989	101.11	.0000	101.11	.00005	.99011	26
35	0.01018	0.99995	0.01018	98.218	1.0000	98.223	0.00005	0.98982	25
36	.01047	.99994	.01047	95.489	.0000	95.490	.00005	.98953	24
37	.01076	.99994	.01076	92.908	.0000	92.914	.00006	.98924	23
38	.01105	.99994	.01105	90.463	.0001	90.469	.00006	.98895	22
39	.01134	.99993	.01134	88.143	.0001	88.149	.00006	.98865	21
40	0.01163	0.99993	0.01164	85.940	1.0001	85.946	0.00007	0.98836	20
41	.01193	.99993	.01193	83.843	.0001	83.849	.00007	.98807	19
42	.01222	.99992	.01222	81.847	.0001	81.853	.00007	.98778	18
43	.01251	.99992	.01251	79.943	.0001	79.950	.00008	.98749	17
44	.01280	.99992	.01280	78.126	.0001	78.133	.00008	.98720	16
45	0.01309	0.99991	0.01309	76.390	1.0001	76.396	0.00008	0.98691	15
46	.01338	.99991	.01338	74.729	.0001	74.736	.00009	.98662	14
47	.01367	.99991	.01367	73.139	.0001	73.146	.00009	.98633	13
48	.01396	.99990	.01396	71.615	.0001	71.622	.00010	.98604	12
49	.01425	.99990	.01425	70.153	.0001	70.160	.00010	.98575	11
50	0.01454	0.99989	0.01454	68.750	1.0001	68.757	0.00010	0.98546	10
51	.01483	.99989	.01484	67.402	.0001	67.409	.00011	.98516	9
52	.01512	.99988	.01513	66.105	.0001	66.113	.00011	.98487	8
53	.01542	.99988	.01542	64.858	.0001	64.866	.00012	.98458	7
54	.01571	.99988	.01571	63.657	.0001	63.664	.00012	.98429	6
55	0.01600	0.99987	0.01600	62.499	1.0001	62.507	0.00013	0.98400	5
56	.01629	.99987	.01629	61.383	.0001	61.391	.00013	.98371	4
57	.01658	.99987	.01658	60.306	.0001	60.314	.00014	.98342	3
58	.01687	.99986	.01687	59.266	.0001	59.274	.00014	.98313	2
59	.01716	.99985	.01716	58.261	.0001	58.270	.00015	.98284	1
60	0.01745	0.99985	0.01745	57.290	1.0001	57.299	0.00015	0.98255	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

90°

89°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.01745	0.99985	0.01745	57.290	1.0001	57.299	0.00015	0.98255	60
1	.01774	.99984	.01775	56.350	.0001	56.359	.00016	.98226	59
2	.01803	.99983	.01804	55.441	.0001	55.450	.00016	.98196	58
3	.01832	.99983	.01833	54.561	.0002	54.570	.00017	.98167	57
4	.01861	.99983	.01862	53.708	.0002	53.718	.00017	.98138	56
5	0.01891	0.99982	0.01891	52.882	1.0002	52.891	0.00018	0.98109	55
6	.01920	.99981	.01920	52.081	.0002	52.090	.00018	.98080	54
7	.01949	.99981	.01949	51.303	.0002	51.313	.00019	.98051	53
8	.01978	.99980	.01978	50.548	.0002	50.558	.00019	.98022	52
9	.02007	.99980	.02007	49.816	.0002	49.826	.00020	.97993	51
10	0.02036	0.99979	0.02036	49.104	1.0002	49.114	0.00021	0.97964	50
11	.02065	.99979	.02066	48.412	.0002	48.422	.00021	.97935	49
12	.02094	.99978	.02095	47.739	.0002	47.750	.00022	.97906	48
13	.02123	.99977	.02124	47.085	.0002	47.095	.00022	.97877	47
14	.02152	.99977	.02153	46.449	.0002	46.460	.00023	.97847	46
15	0.02181	0.99976	0.02182	45.829	1.0002	45.840	0.00024	0.97818	45
16	.02210	.99975	.02211	45.226	.0002	45.237	.00024	.97789	44
17	.02240	.99975	.02240	44.633	.0002	44.650	.00025	.97760	43
18	.02269	.99974	.02269	44.066	.0002	44.077	.00026	.97731	42
19	.02298	.99974	.02298	43.508	.0003	43.520	.00026	.97702	41
20	0.02326	0.99973	0.02327	42.964	1.0003	42.976	0.00027	0.97673	40
21	.02356	.99972	.02357	42.433	.0003	42.445	.00028	.97644	39
22	.02385	.99971	.02386	41.916	.0003	41.928	.00028	.97615	38
23	.02414	.99971	.02415	41.410	.0003	41.423	.00029	.97586	37
24	.02443	.99970	.02444	40.917	.0003	40.930	.00030	.97557	36
25	0.02472	0.99969	0.02473	40.435	1.0003	40.448	0.00030	0.97528	35
26	.02501	.99969	.02502	39.965	.0003	39.978	.00031	.97499	34
27	.02530	.99968	.02531	39.506	.0003	39.518	.00032	.97469	33
28	.02559	.99967	.02560	39.057	.0003	39.069	.00033	.97440	32
29	.02589	.99966	.02589	38.618	.0003	38.631	.00033	.97411	31
30	0.02618	0.99966	0.02618	38.188	1.0003	38.201	0.00034	0.97382	30
31	.02647	.99965	.02648	37.769	.0003	37.782	.00035	.97353	29
32	.02676	.99964	.02677	37.353	.0003	37.371	.00036	.97324	28
33	.02705	.99963	.02706	36.956	.0004	36.969	.00036	.97295	27
34	.02734	.99963	.02735	36.563	.0004	36.576	.00037	.97266	26
35	0.02763	0.99962	0.02764	36.177	1.0004	36.191	0.00037	0.97237	25
36	.02792	.99961	.02793	35.800	.0004	35.814	.00039	.97208	24
37	.02821	.99960	.02822	35.431	.0004	35.445	.00040	.97179	23
38	.02850	.99959	.02851	35.069	.0004	35.084	.00041	.97150	22
39	.02879	.99958	.02880	34.715	.0004	34.729	.00041	.97121	21
40	0.02908	0.99958	0.02910	34.368	1.0004	34.382	0.00042	0.97091	20
41	.02937	.99957	.02937	34.027	.0004	34.042	.00043	.97062	19
42	.02966	.99955	.02966	33.693	.0004	33.708	.00044	.97033	18
43	.02996	.99955	.02997	33.366	.0004	33.381	.00045	.97004	17
44	.03025	.99954	.03026	33.045	.0004	33.060	.00046	.96975	16
45	0.03054	0.99953	0.03055	32.730	1.0005	32.745	0.00046	0.96946	15
46	.03083	.99952	.03084	32.421	.0005	32.437	.00047	.96917	14
47	.03112	.99951	.03113	32.118	.0005	32.134	.00048	.96888	13
48	.03141	.99951	.03143	31.820	.0005	31.836	.00049	.96859	12
49	.03170	.99950	.03172	31.528	.0005	31.544	.00050	.96830	11
50	0.03199	0.99949	0.03201	31.241	1.0005	31.257	0.00051	0.96801	10
51	.03228	.99948	.03230	30.960	.0005	30.976	.00052	.96772	9
52	.03257	.99947	.03259	30.683	.0005	30.699	.00053	.96743	8
53	.03286	.99946	.03288	30.411	.0005	30.428	.00054	.96713	7
54	.03315	.99945	.03317	30.145	.0005	30.161	.00055	.96684	6
55	0.03344	0.99944	0.03346	29.882	1.0005	29.899	0.00056	0.96655	5
56	.03374	.99943	.03375	29.624	.0006	29.641	.00057	.96626	4
57	.03403	.99942	.03405	29.371	.0006	29.388	.00058	.96597	3
58	.03432	.99941	.03434	29.122	.0006	29.139	.00059	.96568	2
59	.03461	.99940	.03463	28.877	.0006	28.894	.00060	.96539	1
60	0.03490	0.99939	0.03492	28.636	1.0006	28.654	0.00061	0.96510	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.03490	0.99939	0.03492	28.636	1.0006	28.654	0.00061	0.96510	60
1	.03519	.99938	.03521	28.399	.0006	28.417	.00002	.96481	59
2	.03548	.99937	.03550	28.166	.0006	28.134	.00003	.96452	58
3	.03577	.99936	.03579	27.937	.0006	27.955	.00004	.96423	57
4	.03606	.99935	.03608	27.712	.0006	27.730	.00005	.96394	56
5	0.03635	0.99934	0.03638	27.490	1.0007	27.508	0.00006	0.96365	55
6	.03664	.99933	.03667	27.271	.0007	27.290	.00007	.96336	54
7	.03693	.99932	.03696	27.056	.0007	27.075	.00008	.96306	53
8	.03722	.99931	.03725	26.845	.0007	26.864	.00009	.96277	52
9	.03751	.99930	.03754	26.637	.0007	26.655	.00010	.96248	51
10	0.03781	0.99928	0.03783	26.432	1.0007	26.450	0.00011	0.96219	50
11	.03810	.99927	.03812	26.230	.0007	26.249	.00013	.96190	49
12	.03839	.99926	.03842	26.031	.0007	26.050	.00014	.96161	48
13	.03868	.99925	.03871	25.835	.0007	25.854	.00015	.96132	47
14	.03897	.99924	.03900	25.642	.0008	25.661	.00016	.96103	46
15	0.03926	0.99923	0.03929	25.452	1.0008	25.471	0.00017	0.96074	45
16	.03955	.99922	.03958	25.264	.0008	25.284	.00018	.96045	44
17	.03984	.99921	.03987	25.080	.0008	25.100	.00019	.96016	43
18	.04013	.99919	.04016	24.898	.0008	24.918	.00020	.95987	42
19	.04042	.99918	.04045	24.718	.0008	24.739	.00022	.95958	41
20	0.04071	0.99917	0.04075	24.542	1.0008	24.562	0.00023	0.95929	40
21	.04100	.99916	.04104	24.367	.0008	24.388	.00024	.95900	39
22	.04129	.99915	.04133	24.196	.0008	24.216	.00025	.95870	38
23	.04158	.99913	.04162	24.026	.0009	24.047	.00026	.95841	37
24	.04187	.99912	.04191	23.859	.0009	23.880	.00028	.95812	36
25	0.04217	0.99911	0.04220	23.694	1.0009	23.716	0.00029	0.95783	35
26	.04246	.99910	.04249	23.532	.0009	23.553	.00030	.95754	34
27	.04275	.99908	.04279	23.372	.0009	23.393	.00031	.95725	33
28	.04304	.99907	.04308	23.214	.0009	23.235	.00033	.95696	32
29	.04333	.99906	.04337	23.058	.0009	23.079	.00034	.95667	31
30	0.04362	0.99905	0.04366	22.904	1.0009	22.925	0.00035	0.95638	30
31	.04391	.99903	.04395	22.752	.0010	22.774	.00036	.95609	29
32	.04420	.99902	.04424	22.602	.0010	22.624	.00038	.95580	28
33	.04449	.99901	.04453	22.454	.0010	22.476	.00039	.95551	27
34	.04478	.99900	.04483	22.308	.0010	22.330	.00100	.95522	26
35	0.04507	0.99898	0.04512	22.164	1.0010	22.186	0.00102	0.95493	25
36	.04536	.99897	.04541	22.022	.0010	22.044	.00103	.95464	24
37	.04565	.99896	.04570	21.881	.0010	21.904	.00104	.95435	23
38	.04594	.99894	.04599	21.742	.0010	21.765	.00106	.95405	22
39	.04623	.99893	.04628	21.606	.0011	21.629	.00107	.95376	21
40	0.04652	0.99892	0.04657	21.470	1.0011	21.494	0.00108	0.95347	20
41	.04681	.99890	.04687	21.337	.0011	21.360	.00110	.95318	19
42	.04711	.99889	.04716	21.205	.0011	21.228	.00111	.95289	18
43	.04740	.99888	.04745	21.075	.0011	21.098	.00112	.95260	17
44	.04769	.99886	.04774	20.946	.0011	20.970	.00114	.95231	16
45	0.04798	0.99885	0.04803	20.819	1.0011	20.843	0.00115	0.95202	15
46	.04827	.99883	.04832	20.693	.0012	20.717	.00116	.95173	14
47	.04856	.99882	.04862	20.569	.0012	20.593	.00118	.95144	13
48	.04885	.99881	.04891	20.446	.0012	20.471	.00119	.95115	12
49	.04914	.99879	.04920	20.325	.0012	20.350	.00121	.95086	11
50	0.04943	0.99878	0.04949	20.205	1.0012	20.230	0.00122	0.95057	10
51	.04972	.99876	.04978	20.087	.0012	20.112	.00124	.95028	9
52	.05001	.99875	.05007	19.970	.0012	19.995	.00125	.94999	8
53	.05030	.99873	.05037	19.854	.0013	19.880	.00127	.94970	7
54	.05059	.99872	.05066	19.740	.0013	19.766	.00128	.94941	6
55	0.05088	0.99870	0.05095	19.627	1.0013	19.653	0.00129	0.94912	5
56	.05117	.99869	.05124	19.515	.0013	19.541	.00131	.94883	4
57	.05146	.99867	.05153	19.405	.0013	19.431	.00132	.94853	3
58	.05175	.99866	.05182	19.296	.0013	19.322	.00134	.94824	2
59	.05204	.99864	.05212	19.188	.0013	19.214	.00135	.94795	1
60	0.05234	0.99863	0.05241	19.081	1.0014	19.107	0.00137	0.94766	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.05234	0.99863	0.05241	19.081	1.0014	19.107	0.00137	0.94766	60
1	.05263	.99861	.05270	18.975	.0014	19.002	.00138	.94737	59
2	.05292	.99860	.05299	18.871	.0014	18.897	.00140	.94708	58
3	.05321	.99858	.05328	18.768	.0014	18.794	.00142	.94679	57
4	.05350	.99857	.05357	18.665	.0014	18.692	.00143	.94650	56
5	0.05379	0.99855	0.05387	18.564	1.0014	18.591	0.00145	0.94621	55
6	.05408	.99854	.05416	18.464	.0015	18.491	.00146	.94592	54
7	.05437	.99852	.05445	18.365	.0015	18.393	.00148	.94563	53
8	.05466	.99850	.05474	18.268	.0015	18.295	.00149	.94534	52
9	.05495	.99849	.05503	18.171	.0015	18.198	.00151	.94505	51
10	0.05524	0.99847	0.05532	18.075	1.0015	18.103	0.00153	0.94476	50
11	.05553	.99846	.05562	17.980	.0015	18.008	.00154	.94447	49
12	.05582	.99844	.05591	17.886	.0016	17.914	.00156	.94418	48
13	.05611	.99842	.05620	17.793	.0016	17.821	.00157	.94389	47
14	.05640	.99841	.05649	17.701	.0016	17.730	.00159	.94360	46
15	0.05669	0.99839	0.05678	17.610	1.0016	17.639	0.00161	0.94331	45
16	.05698	.99837	.05707	17.520	.0016	17.549	.00162	.94302	44
17	.05727	.99836	.05737	17.431	.0016	17.460	.00164	.94273	43
18	.05756	.99834	.05766	17.343	.0017	17.372	.00166	.94244	42
19	.05785	.99832	.05795	17.256	.0017	17.285	.00167	.94214	41
20	0.05814	0.99831	0.05824	17.169	1.0017	17.198	0.00169	0.94185	40
21	.05843	.99829	.05853	17.084	.0017	17.113	.00171	.94156	39
22	.05872	.99827	.05883	16.999	.0017	17.028	.00172	.94127	38
23	.05902	.99826	.05912	16.915	.0017	16.944	.00174	.94098	37
24	.05931	.99824	.05941	16.832	.0018	16.861	.00176	.94069	36
25	0.05960	0.99822	0.05970	16.750	1.0018	16.779	0.00178	0.94040	35
26	.05989	.99820	.05999	16.668	.0018	16.698	.00179	.94011	34
27	.06018	.99819	.06029	16.587	.0018	16.617	.00181	.93982	33
28	.06047	.99817	.06058	16.507	.0018	16.538	.00183	.93953	32
29	.06076	.99815	.06087	16.428	.0018	16.459	.00185	.93924	31
30	0.06105	0.99813	0.06116	16.350	1.0019	16.380	0.00186	0.93895	30
31	.06134	.99812	.06145	16.272	.0019	16.303	.00188	.93866	29
32	.06163	.99810	.06175	16.195	.0019	16.226	.00190	.93837	28
33	.06192	.99808	.06204	16.119	.0019	16.150	.00192	.93808	27
34	.06221	.99806	.06233	16.043	.0019	16.075	.00194	.93779	26
35	0.06250	0.99804	0.06262	15.969	1.0019	16.000	0.00195	0.93750	25
36	.06279	.99803	.06291	15.894	.0020	15.926	.00197	.93721	24
37	.06308	.99801	.06321	15.821	.0020	15.853	.00199	.93692	23
38	.06337	.99799	.06350	15.748	.0020	15.780	.00201	.93663	22
39	.06366	.99797	.06379	15.676	.0020	15.708	.00203	.93634	21
40	0.06395	0.99795	0.06408	15.605	1.0020	15.637	0.00205	0.93605	20
41	.06424	.99793	.06437	15.534	.0021	15.566	.00206	.93576	19
42	.06453	.99791	.06467	15.464	.0021	15.496	.00208	.93547	18
43	.06482	.99790	.06496	15.394	.0021	15.427	.00210	.93518	17
44	.06511	.99788	.06525	15.325	.0021	15.358	.00212	.93489	16
45	0.06540	0.99786	0.06554	15.257	1.0021	15.290	0.00214	0.93460	15
46	.06569	.99784	.06583	15.189	.0022	15.222	.00216	.93431	14
47	.06598	.99782	.06613	15.122	.0022	15.155	.00218	.93402	13
48	.06627	.99780	.06642	15.056	.0022	15.089	.00220	.93373	12
49	.06656	.99778	.06671	14.990	.0022	15.023	.00222	.93343	11
50	0.06685	0.99776	0.06700	14.924	1.0022	14.958	0.00224	0.93314	10
51	.06714	.99774	.06730	14.860	.0023	14.893	.00226	.93285	9
52	.06743	.99772	.06759	14.795	.0023	14.829	.00228	.93256	8
53	.06772	.99770	.06788	14.732	.0023	14.765	.00230	.93227	7
54	.06801	.99768	.06817	14.668	.0023	14.702	.00231	.93198	6
55	0.06830	0.99766	0.06846	14.606	1.0023	14.640	0.00233	0.93169	5
56	.06859	.99764	.06876	14.544	.0024	14.578	.00235	.93140	4
57	.06888	.99762	.06905	14.482	.0024	14.517	.00237	.93111	3
58	.06918	.99760	.06934	14.421	.0024	14.456	.00239	.93082	2
59	.06947	.99758	.06963	14.361	.0024	14.395	.00241	.93053	1
60	0.06976	0.99756	0.06993	14.301	1.0024	14.335	0.00243	0.93024	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.06976	0.99756	0.06993	14.301	1.0024	14.335	0.00243	0.93024	60
1	.07005	.99754	.07022	14.241	.0025	14.276	.00246	.92995	59
2	.07034	.99752	.07051	14.182	.0025	14.217	.00248	.92966	58
3	.07063	.99750	.07080	14.123	.0025	14.159	.00250	.92937	57
4	.07092	.99748	.07110	14.065	.0025	14.101	.00252	.92908	56
5	0.07121	0.99746	0.07139	14.008	1.0025	14.043	0.00254	0.92879	55
6	.07150	.99744	.07168	13.951	.0026	13.986	.00256	.92850	54
7	.07179	.99742	.07197	13.894	.0026	13.930	.00258	.92821	53
8	.07208	.99740	.07226	13.838	.0026	13.874	.00260	.92792	52
9	.07237	.99738	.07256	13.782	.0026	13.818	.00262	.92763	51
10	0.07266	0.99736	0.07285	13.727	1.0026	13.763	0.00264	0.92734	50
11	.07295	.99733	.07314	13.672	.0027	13.708	.00266	.92705	49
12	.07324	.99731	.07343	13.617	.0027	13.654	.00268	.92676	48
13	.07353	.99729	.07373	13.563	.0027	13.600	.00271	.92647	47
14	.07382	.99727	.07402	13.510	.0027	13.547	.00273	.92618	46
15	0.07411	0.99725	0.07431	13.457	1.0027	13.494	0.00275	0.92589	45
16	.07440	.99723	.07460	13.404	.0028	13.441	.00277	.92560	44
17	.07469	.99721	.07490	13.351	.0028	13.389	.00279	.92531	43
18	.07498	.99718	.07519	13.299	.0028	13.337	.00281	.92502	42
19	.07527	.99716	.07548	13.248	.0028	13.286	.00284	.92473	41
20	0.07556	0.99714	0.07577	13.197	1.0029	13.235	0.00286	0.92444	40
21	.07585	.99712	.07607	13.146	.0029	13.184	.00288	.92415	39
22	.07614	.99710	.07636	13.096	.0029	13.134	.00290	.92386	38
23	.07643	.99707	.07665	13.046	.0029	13.084	.00292	.92357	37
24	.07672	.99705	.07694	12.996	.0029	13.034	.00295	.92328	36
25	0.07701	0.99703	0.07724	12.947	1.0030	12.985	0.00297	0.92299	35
26	.07730	.99701	.07753	12.898	.0030	12.937	.00299	.92270	34
27	.07759	.99698	.07782	12.849	.0030	12.888	.00301	.92241	33
28	.07788	.99696	.07812	12.801	.0030	12.840	.00304	.92212	32
29	.07817	.99694	.07841	12.754	.0031	12.793	.00306	.92183	31
30	0.07846	0.99692	0.07870	12.706	1.0031	12.745	0.00308	0.92154	30
31	.07875	.99689	.07899	12.659	.0031	12.698	.00310	.92125	29
32	.07904	.99687	.07929	12.612	.0031	12.652	.00313	.92096	28
33	.07933	.99685	.07958	12.566	.0032	12.606	.00315	.92067	27
34	.07962	.99682	.07987	12.520	.0032	12.560	.00317	.92038	26
35	0.07991	0.99680	0.08016	12.474	1.0032	12.514	0.00320	0.92009	25
36	.08020	.99678	.08046	12.429	.0032	12.469	.00322	.91980	24
37	.08049	.99675	.08075	12.384	.0032	12.424	.00324	.91951	23
38	.08078	.99673	.08104	12.339	.0033	12.379	.00327	.91922	22
39	.08107	.99671	.08134	12.295	.0033	12.335	.00329	.91893	21
40	0.08136	0.99668	0.08163	12.250	1.0033	12.291	0.00331	0.91864	20
41	.08165	.99666	.08192	12.207	.0033	12.248	.00334	.91835	19
42	.08194	.99664	.08221	12.163	.0034	12.204	.00336	.91806	18
43	.08223	.99661	.08251	12.120	.0034	12.161	.00339	.91777	17
44	.08252	.99659	.08280	12.077	.0034	12.118	.00341	.91748	16
45	0.08281	0.99656	0.08309	12.035	1.0034	12.076	0.00343	0.91719	15
46	.08310	.99654	.08339	11.992	.0035	12.034	.00346	.91690	14
47	.08339	.99652	.08368	11.950	.0035	11.992	.00348	.91661	13
48	.08368	.99649	.08397	11.909	.0035	11.950	.00351	.91632	12
49	.08397	.99647	.08426	11.867	.0035	11.909	.00353	.91603	11
50	0.08426	0.99644	0.08456	11.826	1.0036	11.868	0.00356	0.91574	10
51	.08455	.99642	.08485	11.785	.0036	11.828	.00358	.91545	9
52	.08484	.99639	.08514	11.745	.0036	11.787	.00360	.91516	8
53	.08513	.99637	.08544	11.704	.0036	11.747	.00363	.91487	7
54	.08542	.99634	.08573	11.664	.0037	11.707	.00365	.91458	6
55	0.08571	0.99632	0.08602	11.625	1.0037	11.668	0.00368	0.91429	5
56	.08600	.99629	.08632	11.585	.0037	11.628	.00370	.91400	4
57	.08629	.99627	.08661	11.546	.0037	11.589	.00373	.91371	3
58	.08658	.99624	.08690	11.507	.0038	11.550	.00375	.91342	2
59	.08687	.99622	.08719	11.468	.0038	11.512	.00378	.91313	1
60	0.08715	0.99619	0.08749	11.430	1.0038	11.474	0.00380	0.91284	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.08715	0.99619	0.08749	11.430	1.0038	11.474	0.00380	0.91284	60
1	0.08744	0.99617	0.08773	11.392	0.0033	11.436	0.00333	0.91255	59
2	0.08773	0.99614	0.08807	11.354	0.0039	11.398	0.00356	0.91226	58
3	0.08802	0.99612	0.08837	11.316	0.0039	11.360	0.00388	0.91197	57
4	0.08831	0.99609	0.08866	11.279	0.0039	11.323	0.00391	0.91168	56
5	0.08860	0.99607	0.08895	11.242	1.0039	11.286	0.00393	0.91139	55
6	0.08889	0.99604	0.08925	11.205	0.0040	11.249	0.00396	0.91110	54
7	0.08918	0.99601	0.08954	11.168	0.0040	11.213	0.00398	0.91082	53
8	0.08947	0.99599	0.08983	11.132	0.0040	11.176	0.00401	0.91053	52
9	0.08976	0.99596	0.09013	11.095	0.0040	11.140	0.00404	0.91024	51
10	0.09005	0.99594	0.09042	11.059	1.0041	11.104	0.00406	0.90995	50
11	0.09034	0.99591	0.09071	11.024	0.0041	11.069	0.00409	0.90966	49
12	0.09063	0.99588	0.09101	10.988	0.0041	11.033	0.00411	0.90937	48
13	0.09092	0.99586	0.09130	10.953	0.0041	10.998	0.00414	0.90908	47
14	0.09121	0.99583	0.09159	10.918	0.0042	10.963	0.00417	0.90879	46
15	0.09150	0.99580	0.09189	10.883	1.0042	10.929	0.00419	0.90850	45
16	0.09179	0.99578	0.09218	10.848	0.0042	10.894	0.00422	0.90821	44
17	0.09208	0.99575	0.09247	10.814	0.0043	10.860	0.00425	0.90792	43
18	0.09237	0.99572	0.09277	10.780	0.0043	10.826	0.00427	0.90763	42
19	0.09266	0.99570	0.09306	10.746	0.0043	10.792	0.00430	0.90734	41
20	0.09295	0.99567	0.09335	10.712	1.0043	10.758	0.00433	0.90705	40
21	0.09324	0.99564	0.09365	10.678	0.0044	10.725	0.00436	0.90676	39
22	0.09353	0.99562	0.09396	10.645	0.0044	10.692	0.00438	0.90647	38
23	0.09382	0.99559	0.09423	10.612	0.0044	10.659	0.00441	0.90618	37
24	0.09411	0.99556	0.09453	10.579	0.0044	10.626	0.00444	0.90589	36
25	0.09440	0.99553	0.09482	10.546	1.0045	10.593	0.00446	0.90560	35
26	0.09469	0.99551	0.09511	10.514	0.0045	10.561	0.00449	0.90531	34
27	0.09498	0.99548	0.09541	10.481	0.0045	10.529	0.00452	0.90502	33
28	0.09527	0.99545	0.09570	10.449	0.0046	10.497	0.00455	0.90473	32
29	0.09556	0.99542	0.09599	10.417	0.0046	10.465	0.00458	0.90444	31
30	0.09584	0.99540	0.09629	10.385	1.0046	10.433	0.00460	0.90415	30
31	0.09613	0.99537	0.09658	10.354	0.0046	10.402	0.00463	0.90386	29
32	0.09642	0.99534	0.09688	10.322	0.0047	10.371	0.00466	0.90357	28
33	0.09671	0.99531	0.09717	10.291	0.0047	10.340	0.00469	0.90328	27
34	0.09700	0.99528	0.09746	10.260	0.0047	10.309	0.00472	0.90300	26
35	0.09729	0.99525	0.09776	10.229	1.0048	10.278	0.00474	0.90271	25
36	0.09758	0.99523	0.09805	10.199	0.0048	10.248	0.00477	0.90242	24
37	0.09787	0.99520	0.09834	10.168	0.0048	10.217	0.00480	0.90213	23
38	0.09816	0.99517	0.09864	10.138	0.0048	10.187	0.00483	0.90184	22
39	0.09845	0.99514	0.09893	10.108	0.0049	10.157	0.00486	0.90155	21
40	0.09874	0.99511	0.09922	10.078	1.0049	10.127	0.00489	0.90126	20
41	0.09903	0.99508	0.09952	10.048	0.0049	10.097	0.00491	0.90097	19
42	0.09932	0.99505	0.09981	10.019	0.0050	10.068	0.00494	0.90068	18
43	0.09961	0.99503	1.00011	9.9893	0.0050	10.039	0.00497	0.90039	17
44	0.09990	0.99500	1.00040	9.9601	0.0050	10.010	0.00500	0.90010	16
45	0.10019	0.99497	0.10069	9.9310	1.0050	9.9812	0.00503	0.89981	15
46	0.10048	0.99494	1.00099	9.9021	0.0051	9.9525	0.00506	0.89952	14
47	0.10077	0.99491	1.0128	9.8734	0.0051	9.9239	0.00509	0.89923	13
48	0.10106	0.99488	1.0158	9.8448	0.0051	9.8955	0.00512	0.89894	12
49	0.10134	0.99485	1.0187	9.8164	0.0052	9.8672	0.00515	0.89865	11
50	0.10163	0.99482	0.10216	9.7882	1.0052	9.8391	0.00518	0.89836	10
51	0.10192	0.99479	1.0246	9.7601	0.0052	9.8112	0.00521	0.89807	9
52	0.10221	0.99476	1.0275	9.7322	0.0053	9.7834	0.00524	0.89779	8
53	0.10250	0.99473	1.0305	9.7044	0.0053	9.7558	0.00527	0.89750	7
54	0.10279	0.99470	1.0334	9.6763	0.0053	9.7283	0.00530	0.89721	6
55	0.10308	0.99467	0.10363	9.6493	1.0053	9.7010	0.00533	0.89692	5
56	0.10337	0.99464	1.0393	9.6220	0.0054	9.6739	0.00536	0.89663	4
57	0.10366	0.99461	1.0422	9.5949	0.0054	9.6469	0.00539	0.89634	3
58	0.10395	0.99458	1.0452	9.5679	0.0054	9.6200	0.00542	0.89605	2
59	0.10424	0.99455	1.0481	9.5411	0.0055	9.5933	0.00545	0.89576	1
60	0.10453	0.99452	0.10510	9.5144	1.0055	9.5660	0.00548	0.89547	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

6°

Natural Trigonometric Functions

173°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.10453	0.99452	0.10510	9.5144	1.0055	9.5663	0.00548	0.89547	60
1	.10432	.99449	.10540	.4878	.0055	.5404	.00551	.89518	59
2	.10511	.99446	.10569	.4614	.0056	.5141	.00554	.89489	58
3	.10540	.99443	.10599	.4351	.0056	.4880	.00557	.89460	57
4	.10568	.99440	.10628	.4090	.0056	.4620	.00560	.89431	56
5	0.10597	0.99437	0.10657	9.3831	1.0057	9.4362	0.00563	0.89402	55
6	.10626	.99434	.10687	.3572	.0057	.4105	.00566	.89373	54
7	.10655	.99431	.10716	.3315	.0057	.3850	.00569	.89345	53
8	.10684	.99428	.10746	.3060	.0057	.3596	.00572	.89316	52
9	.10713	.99424	.10775	.2806	.0058	.3343	.00575	.89287	51
10	0.10742	0.99421	0.10805	9.2553	1.0058	9.3092	0.00579	0.89258	50
11	.10771	.99418	.10834	.2302	.0058	.2842	.00582	.89229	49
12	.10800	.99415	.10863	.2051	.0059	.2593	.00585	.89200	48
13	.10829	.99412	.10893	.1803	.0059	.2346	.00588	.89171	47
14	.10858	.99409	.10922	.1555	.0059	.2100	.00591	.89142	46
15	0.10887	0.99406	0.10952	9.1309	1.0060	9.1855	0.00594	0.89113	45
16	.10916	.99402	.10981	.1064	.0060	.1612	.00597	.89084	44
17	.10944	.99399	.11011	.0821	.0060	.1370	.00601	.89055	43
18	.10973	.99396	.11040	.0579	.0061	.1129	.00604	.89026	42
19	.11002	.99393	.11069	.0338	.0061	.0890	.00607	.88998	41
20	0.11031	0.99390	0.11099	9.0098	1.0061	9.0651	0.00610	0.88969	40
21	.11060	.99386	.11128	8.9860	.0062	.0414	.00613	.88940	39
22	.11089	.99383	.11158	.9623	.0062	.0179	.00617	.88911	38
23	.11118	.99380	.11187	.9387	.0062	8.9944	.00620	.88882	37
24	.11147	.99377	.11217	.9152	.0063	.9711	.00623	.88853	36
25	0.11176	0.99373	0.11246	8.8918	1.0063	8.9479	0.00626	0.88824	35
26	.11205	.99370	.11276	.8686	.0063	.9248	.00630	.88795	34
27	.11234	.99367	.11305	.8455	.0064	.9018	.00633	.88766	33
28	.11262	.99364	.11335	.8225	.0064	.8790	.00636	.88737	32
29	.11291	.99360	.11364	.7996	.0064	.8563	.00639	.88708	31
30	0.11320	0.99357	0.11393	8.7769	1.0065	8.8337	0.00643	0.88680	30
31	.11349	.99354	.11423	.7542	.0065	.8112	.00646	.88651	29
32	.11378	.99350	.11452	.7317	.0065	.7886	.00649	.88622	28
33	.11407	.99347	.11482	.7093	.0066	.7665	.00653	.88593	27
34	.11436	.99344	.11511	.6870	.0066	.7444	.00656	.88564	26
35	0.11465	0.99341	0.11541	8.6648	1.0066	8.7223	0.00659	0.88535	25
36	.11494	.99337	.11570	.6627	.0067	.7204	.00663	.88506	24
37	.11523	.99334	.11600	.6408	.0067	.6986	.00666	.88477	23
38	.11551	.99330	.11629	.6189	.0067	.6769	.00669	.88448	22
39	.11580	.99327	.11659	.5972	.0068	.6553	.00673	.88420	21
40	0.11609	0.99324	0.11688	8.5555	1.0068	8.6138	0.00676	0.88391	20
41	.11638	.99320	.11718	.5340	.0068	.5924	.00679	.88362	19
42	.11667	.99317	.11747	.5126	.0069	.5711	.00683	.88333	18
43	.11696	.99314	.11777	.4913	.0069	.5499	.00686	.88304	17
44	.11725	.99310	.11806	.4701	.0069	.5289	.00690	.88275	16
45	0.11754	0.99307	0.11836	8.4489	1.0070	8.5079	0.00693	0.88246	15
46	.11783	.99303	.11865	.4279	.0070	.4871	.00696	.88217	14
47	.11811	.99300	.11895	.4070	.0070	.4663	.00700	.88188	13
48	.11840	.99296	.11924	.3862	.0071	.4457	.00703	.88160	12
49	.11869	.99293	.11954	.3655	.0071	.4251	.00707	.88131	11
50	0.11898	0.99290	0.11983	8.3449	1.0071	8.4046	0.00710	0.88102	10
51	.11927	.99286	.12013	.3244	.0072	.3843	.00714	.88073	9
52	.11956	.99283	.12042	.3040	.0072	.3640	.00717	.88044	8
53	.11985	.99279	.12072	.2837	.0073	.3439	.00721	.88015	7
54	.12014	.99276	.12101	.2635	.0073	.3238	.00724	.87986	6
55	0.12042	0.99272	0.12131	8.2434	1.0073	8.3039	0.00728	0.87957	5
56	.12071	.99269	.12160	.2234	.0074	.2840	.00731	.87928	4
57	.12100	.99265	.12190	.2035	.0074	.2642	.00735	.87900	3
58	.12129	.99262	.12219	.1837	.0074	.2446	.00738	.87871	2
59	.12158	.99258	.12249	.1640	.0075	.2250	.00742	.87842	1
60	0.12187	0.99255	0.12278	8.1443	1.0075	8.2055	0.00745	0.87813	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.12187	0.99255	0.12278	8.1443	1.0075	8.2055	0.00745	0.87813	60
1	.12216	.99251	.12308	.1248	.0075	.1261	.00749	.87787	59
2	.12245	.99247	.12337	.1053	.0076	.1668	.00752	.87755	58
3	.12273	.99244	.12367	.0860	.0076	.1476	.00756	.87726	57
4	.12302	.99240	.12396	.0667	.0076	.1285	.00760	.87697	56
5	0.12331	0.99237	0.12426	8.0476	1.0077	8.1094	0.00763	0.87669	55
6	.12360	.99233	.12456	.0285	.0077	.0905	.00767	.87640	54
7	.12389	.99229	.12485	.0095	.0078	.0717	.00770	.87611	53
8	.12418	.99226	.12515	7.9906	.0078	.0529	.00774	.87582	52
9	.12447	.99222	.12544	.9717	.0078	.0342	.00778	.87553	51
10	0.12476	0.99219	0.12574	7.9530	1.0079	8.0156	0.00781	0.87524	50
11	.12504	.99215	.12603	.9344	.0079	7.9971	.00785	.87495	49
12	.12533	.99211	.12633	.9158	.0079	.9787	.00788	.87467	48
13	.12562	.99208	.12662	.8973	.0080	.9604	.00792	.87438	47
14	.12591	.99204	.12692	.8789	.0080	.9421	.00796	.87409	46
15	0.12620	0.99200	0.12722	7.8606	1.0080	7.9240	0.00799	0.87380	45
16	.12649	.99197	.12751	.8424	.0081	.9059	.00803	.87351	44
17	.12678	.99193	.12781	.8243	.0081	.8879	.00807	.87322	43
18	.12706	.99189	.12810	.8062	.0082	.8700	.00810	.87293	42
19	.12735	.99186	.12840	.7882	.0082	.8522	.00814	.87265	41
20	0.12764	0.99182	0.12869	7.7703	1.0082	7.8344	0.00818	0.87236	40
21	.12793	.99178	.12899	.7525	.0083	.8163	.00822	.87207	39
22	.12822	.99174	.12928	.7348	.0083	.7992	.00825	.87178	38
23	.12851	.99171	.12958	.7171	.0084	.7817	.00829	.87149	37
24	.12879	.99167	.12988	.6996	.0084	.7642	.00833	.87120	36
25	0.12908	0.99163	0.13017	7.6821	1.0084	7.7469	0.00837	0.87091	35
26	.12937	.99160	.13047	.6646	.0085	.7296	.00840	.87063	34
27	.12966	.99156	.13076	.6473	.0085	.7124	.00844	.87034	33
28	.12995	.99152	.13106	.6300	.0085	.6953	.00848	.87005	32
29	.13024	.99148	.13136	.6129	.0086	.6783	.00852	.86976	31
30	0.13053	0.99144	0.13165	7.5957	1.0086	7.6613	0.00855	0.86947	30
31	.13081	.99141	.13195	.5787	.0087	.6444	.00859	.86918	29
32	.13110	.99137	.13224	.5617	.0087	.6276	.00863	.86890	28
33	.13139	.99133	.13254	.5449	.0087	.6108	.00867	.86861	27
34	.13168	.99129	.13284	.5280	.0088	.5942	.00871	.86832	26
35	0.13197	0.99125	0.13313	7.5113	1.0088	7.5776	0.00875	0.86803	25
36	.13226	.99121	.13343	.4946	.0089	.5611	.00878	.86774	24
37	.13254	.99118	.13372	.4780	.0089	.5446	.00882	.86745	23
38	.13283	.99114	.13402	.4615	.0089	.5282	.00886	.86717	22
39	.13312	.99110	.13432	.4451	.0090	.5119	.00890	.86688	21
40	0.13341	0.99106	0.13461	7.4287	1.0090	7.4957	0.00894	0.86659	20
41	.13370	.99102	.13491	.4124	.0090	.4795	.00898	.86630	19
42	.13399	.99098	.13520	.3961	.0091	.4634	.00902	.86601	18
43	.13427	.99094	.13550	.3800	.0091	.4474	.00905	.86572	17
44	.13456	.99090	.13580	.3639	.0092	.4315	.00909	.86544	16
45	0.13485	0.99086	0.13609	7.3479	1.0092	7.4156	0.00913	0.86515	15
46	.13514	.99083	.13639	.3319	.0092	.3998	.00917	.86486	14
47	.13543	.99079	.13669	.3160	.0093	.3840	.00921	.86457	13
48	.13571	.99075	.13698	.3002	.0093	.3683	.00925	.86428	12
49	.13600	.99071	.13728	.2844	.0094	.3527	.00929	.86400	11
50	0.13629	0.99067	0.13757	7.2687	1.0094	7.3372	0.00933	0.86371	10
51	.13658	.99063	.13787	.2531	.0094	.3217	.00937	.86342	9
52	.13687	.99059	.13817	.2375	.0095	.3063	.00941	.86313	8
53	.13716	.99055	.13846	.2220	.0095	.2909	.00945	.86284	7
54	.13744	.99051	.13876	.2066	.0096	.2757	.00949	.86255	6
55	0.13773	0.99047	0.13906	7.1912	1.0096	7.2604	0.00953	0.86227	5
56	.13802	.99043	.13935	.1759	.0097	.2453	.00957	.86198	4
57	.13831	.99039	.13965	.1607	.0097	.2302	.00961	.86169	3
58	.13860	.99035	.13995	.1455	.0097	.2152	.00965	.86140	2
59	.13888	.99031	.14024	.1304	.0098	.2002	.00969	.86111	1
60	0.13917	0.99027	0.14054	7.1154	1.0098	7.1853	0.00973	0.86083	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



8°

Natural Trigonometric Functions

171°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.13917	0.99027	0.14054	7.1154	1.0098	7.1853	0.00973	0.86083	60
1	.13946	.99023	.14084	.1004	.0099	.1704	.00977	.86054	59
2	.13975	.99019	.14113	.0854	.0099	.1557	.00981	.86025	58
3	.14004	.99015	.14143	.0706	.0099	.1409	.00985	.85996	57
4	.14032	.99010	.14173	.0558	.0100	.1263	.00989	.85967	56
5	0.14061	0.99006	0.14202	7.0410	1.0100	7.1117	0.00993	0.85939	55
6	.14090	.99002	.14232	.0264	.0101	.0972	.00998	.85910	54
7	.14119	.98998	.14262	.0117	.0101	.0827	.01002	.85881	53
8	.14148	.98994	.14291	6.9972	.0102	.0683	.01006	.85852	52
9	.14176	.98990	.14321	.9827	.0102	.0539	.01010	.85823	51
10	0.14205	0.98986	0.14351	6.9682	1.0102	7.0396	0.01014	0.85795	50
11	.14234	.98982	.14380	.9538	.0103	.0254	.01018	.85766	49
12	.14263	.98978	.14410	.9395	.0103	.0112	.01022	.85737	48
13	.14292	.98973	.14440	.9252	.0104	6.9971	.01026	.85708	47
14	.14320	.98969	.14470	.9110	.0104	.9830	.01031	.85679	46
15	0.14349	0.98965	0.14499	6.8969	1.0104	6.9690	0.01035	0.85651	45
16	.14378	.98961	.14529	.8828	.0105	.9550	.01039	.85622	44
17	.14407	.98957	.14559	.8687	.0105	.9411	.01043	.85593	43
18	.14436	.98952	.14588	.8547	.0106	.9273	.01047	.85564	42
19	.14464	.98948	.14618	.8408	.0106	.9135	.01052	.85536	41
20	0.14493	0.98944	0.14648	6.8269	1.0107	6.8998	0.01056	0.85507	40
21	.14522	.98940	.14677	.8131	.0107	.8861	.01060	.85478	39
22	.14551	.98936	.14707	.7993	.0107	.8725	.01064	.85449	38
23	.14579	.98931	.14737	.7856	.0108	.8589	.01068	.85420	37
24	.14608	.98927	.14767	.7720	.0108	.8454	.01073	.85392	36
25	0.14637	0.98923	0.14796	6.7584	1.0109	6.8320	0.01077	0.85363	35
26	.14666	.98919	.14826	.7448	.0109	.8185	.01081	.85334	34
27	.14695	.98914	.14856	.7313	.0110	.8052	.01085	.85305	33
28	.14723	.98910	.14886	.7179	.0110	.7919	.01090	.85277	32
29	.14752	.98906	.14915	.7045	.0111	.7787	.01094	.85248	31
30	0.14781	0.98901	0.14945	6.6911	1.0111	6.7655	0.01098	0.85219	30
31	.14810	.98897	.14975	.6779	.0111	.7523	.01103	.85190	29
32	.14838	.98893	.15004	.6646	.0112	.7392	.01107	.85161	28
33	.14867	.98889	.15034	.6514	.0112	.7262	.01111	.85133	27
34	.14896	.98884	.15064	.6383	.0113	.7132	.01116	.85104	26
35	0.14925	0.98880	0.15094	6.6252	1.0113	6.7003	0.01120	0.85075	25
36	.14953	.98876	.15123	.6122	.0114	.6874	.01124	.85046	24
37	.14982	.98871	.15153	.5992	.0114	.6745	.01129	.85018	23
38	.15011	.98867	.15183	.5863	.0115	.6617	.01133	.84989	22
39	.15040	.98862	.15213	.5734	.0115	.6490	.01137	.84960	21
40	0.15068	0.98858	0.15243	6.5605	1.0115	6.6363	0.01142	0.84931	20
41	.15097	.98854	.15272	.5478	.0116	.6237	.01146	.84903	19
42	.15126	.98849	.15302	.5350	.0116	.6111	.01151	.84874	18
43	.15155	.98845	.15332	.5223	.0117	.5985	.01155	.84845	17
44	.15183	.98840	.15362	.5097	.0117	.5860	.01159	.84816	16
45	0.15212	0.98836	0.15391	6.4971	1.0118	6.5736	0.01164	0.84788	15
46	.15241	.98832	.15421	.4845	.0118	.5612	.01168	.84759	14
47	.15270	.98827	.15451	.4720	.0119	.5488	.01173	.84730	13
48	.15298	.98823	.15481	.4596	.0119	.5365	.01177	.84701	12
49	.15328	.98818	.15511	.4472	.0119	.5243	.01182	.84672	11
50	0.15356	0.98814	0.15540	6.4348	1.0120	6.5121	0.01186	0.84644	10
51	.15385	.98809	.15570	.4225	.0120	.4999	.01190	.84615	9
52	.15413	.98805	.15600	.4103	.0121	.4878	.01195	.84586	8
53	.15442	.98800	.15630	.3980	.0121	.4757	.01199	.84558	7
54	.15471	.98796	.15659	.3859	.0122	.4637	.01204	.84529	6
55	0.15500	0.98791	0.15689	6.3737	1.0122	6.4517	0.01208	0.84500	5
56	.15528	.98787	.15719	.3616	.0123	.4498	.01213	.84471	4
57	.15557	.98782	.15749	.3496	.0123	.4279	.01217	.84443	3
58	.15586	.98778	.15779	.3376	.0124	.4160	.01222	.84414	2
59	.15615	.98773	.15809	.3257	.0124	.4042	.01227	.84385	1
60	0.15643	0.98769	0.15838	6.3137	1.0125	6.3924	0.01231	0.84356	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

96°

81°



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.15643	0.98769	0.15838	6.3137	1.0125	6.3924	0.01231	0.84356	60
1	.15672	.98764	.15868	.3019	.0125	.3807	.01236	.84328	59
2	.15701	.98760	.15898	.2901	.0125	.3690	.01240	.84299	58
3	.15730	.98755	.15928	.2783	.0126	.3574	.01245	.84270	57
4	.15758	.98750	.15958	.2665	.0126	.3458	.01249	.84242	56
5	0.15787	0.98746	0.15987	6.2548	1.0127	6.3343	0.01254	0.84213	55
6	.15816	.98741	.16017	.2432	.0127	.3228	.01259	.84184	54
7	.15844	.98737	.16047	.2316	.0128	.3113	.01263	.84155	53
8	.15873	.98732	.16077	.2200	.0128	.2999	.01268	.84127	52
9	.15902	.98727	.16107	.2085	.0129	.2885	.01272	.84098	51
10	0.15931	0.98723	0.16137	6.1970	1.0129	6.2772	0.01277	0.84069	50
11	.15959	.98718	.16167	.1856	.0130	.2659	.01282	.84041	49
12	.15988	.98714	.16196	.1742	.0130	.2546	.01286	.84012	48
13	.16017	.98709	.16226	.1628	.0131	.2434	.01291	.83983	47
14	.16045	.98704	.16256	.1515	.0131	.2322	.01296	.83954	46
15	0.16074	0.98700	0.16286	6.1402	1.0132	6.2211	0.01300	0.83926	45
16	.16103	.98695	.16316	.1290	.0132	.2100	.01305	.83897	44
17	.16132	.98690	.16346	.1178	.0133	.1990	.01310	.83868	43
18	.16160	.98685	.16376	.1066	.0133	.1880	.01314	.83840	42
19	.16189	.98681	.16405	.0955	.0134	.1770	.01319	.83811	41
20	0.16218	0.98676	0.16435	6.0844	1.0134	6.1661	0.01324	0.83782	40
21	.16246	.98671	.16465	.0734	.0135	.1552	.01328	.83753	39
22	.16275	.98667	.16495	.0624	.0135	.1443	.01333	.83725	38
23	.16304	.98662	.16525	.0514	.0136	.1335	.01338	.83696	37
24	.16333	.98657	.16555	.0405	.0136	.1227	.01343	.83667	36
25	0.16361	0.98652	0.16585	6.0296	1.0136	6.1120	0.01347	0.83639	35
26	.16390	.98648	.16615	.0188	.0137	.1013	.01352	.83610	34
27	.16419	.98643	.16644	.0080	.0137	.0906	.01357	.83581	33
28	.16447	.98638	.16674	5.9972	.0138	.0800	.01362	.83553	32
29	.16476	.98633	.16704	.9865	.0138	.0694	.01367	.83524	31
30	0.16505	0.98628	0.16734	5.9758	1.0139	6.0588	0.01371	0.83495	30
31	.16533	.98624	.16764	.9651	.0139	.0483	.01376	.83466	29
32	.16562	.98619	.16794	.9545	.0140	.0379	.01381	.83438	28
33	.16591	.98614	.16824	.9439	.0140	.0274	.01386	.83409	27
34	.16619	.98609	.16854	.9333	.0141	.0170	.01391	.83380	26
35	0.16648	0.98604	0.16884	5.9228	1.0141	6.0066	0.01395	0.83352	25
36	.16677	.98600	.16914	.9123	.0142	5.9963	.01400	.83323	24
37	.16705	.98595	.16944	.9019	.0142	.9860	.01405	.83294	23
38	.16734	.98590	.16973	.8915	.0143	.9758	.01410	.83266	22
39	.16763	.98585	.17003	.8811	.0143	.9655	.01415	.83237	21
40	0.16791	0.98580	0.17033	5.8708	1.0144	5.9554	0.01420	0.83208	20
41	.16820	.98575	.17063	.8605	.0144	.9452	.01425	.83180	19
42	.16849	.98570	.17093	.8502	.0145	.9351	.01430	.83151	18
43	.16878	.98565	.17123	.8400	.0145	.9250	.01434	.83122	17
44	.16906	.98560	.17153	.8298	.0146	.9150	.01439	.83094	16
45	0.16935	0.98556	0.17183	5.8196	1.0146	5.9049	0.01444	0.83065	15
46	.16964	.98551	.17213	.8095	.0147	.8950	.01449	.83036	14
47	.16992	.98546	.17243	.7994	.0147	.8850	.01454	.83008	13
48	.17021	.98541	.17273	.7894	.0148	.8751	.01459	.82979	12
49	.17050	.98536	.17303	.7794	.0148	.8652	.01464	.82950	11
50	0.17078	0.98531	0.17333	5.7694	1.0149	5.8554	0.01469	0.82922	10
51	.17107	.98526	.17363	.7594	.0150	.8456	.01474	.82893	9
52	.17136	.98521	.17393	.7495	.0150	.8358	.01479	.82864	8
53	.17164	.98516	.17423	.7396	.0151	.8261	.01484	.82836	7
54	.17193	.98511	.17453	.7297	.0151	.8163	.01489	.82807	6
55	0.17221	0.98506	0.17483	5.7199	1.0152	5.8067	0.01494	0.82778	5
56	.17250	.98501	.17513	.7101	.0152	.7970	.01499	.82750	4
57	.17279	.98496	.17543	.7004	.0153	.7874	.01504	.82721	3
58	.17307	.98491	.17573	.6906	.0153	.7778	.01509	.82692	2
59	.17336	.98486	.17603	.6809	.0154	.7683	.01514	.82664	1
60	0.17365	0.98481	0.17633	5.6713	1.0154	5.7588	0.01519	0.82635	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

10°

Natural Trigonometric Functions

169°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.17365	0.98481	0.17633	5.6713	1.0154	5.7588	0.01519	0.82635	60
1	.17393	.98476	.17663	.6616	.0155	.7493	.01524	.82606	59
2	.17422	.98471	.17693	.6520	.0155	.7398	.01529	.82578	58
3	.17451	.98465	.17723	.6425	.0156	.7304	.01534	.82549	57
4	.17479	.98460	.17753	.6329	.0156	.7210	.01539	.82521	56
5	0.17508	0.93455	0.17783	5.6234	1.0157	5.7117	0.01544	0.82492	55
6	.17537	.98450	.17813	.6140	.0157	.7023	.01550	.82463	54
7	.17565	.98445	.17843	.6045	.0158	.6930	.01555	.82435	53
8	.17594	.98440	.17873	.5951	.0158	.6838	.01560	.82406	52
9	.17622	.98435	.17903	.5857	.0159	.6745	.01565	.82377	51
10	0.17651	0.98430	0.17933	5.5764	1.0159	5.6653	0.01570	0.82349	50
11	.17680	.98425	.17963	.5670	.0160	.6661	.01575	.82320	49
12	.17708	.98419	.17993	.5578	.0160	.6570	.01580	.82291	48
13	.17737	.98414	.18023	.5485	.0161	.6379	.01585	.82263	47
14	.17766	.98409	.18053	.5393	.0162	.6288	.01591	.82234	46
15	0.17794	0.98404	0.18083	5.5301	1.0162	5.6197	0.01596	0.82206	45
16	.17823	.98399	.18113	.5209	.0163	.6107	.01601	.82177	44
17	.17852	.98394	.18143	.5117	.0163	.6017	.01606	.82148	43
18	.17880	.98388	.18173	.5026	.0164	.5928	.01611	.82120	42
19	.17909	.98383	.18203	.4936	.0164	.5838	.01617	.82091	41
20	0.17937	0.98378	0.18233	5.4845	1.0165	5.5749	0.01622	0.82062	40
21	.17966	.98373	.18263	.4755	.0165	.5660	.01627	.82034	39
22	.17995	.98368	.18293	.4665	.0166	.5572	.01632	.82005	38
23	.18023	.98362	.18323	.4575	.0166	.5484	.01638	.81977	37
24	.18052	.98357	.18353	.4486	.0167	.5396	.01643	.81948	36
25	0.18080	0.98352	0.18383	5.4396	1.0167	5.5308	0.01648	0.81919	35
26	.18109	.98347	.18413	.4308	.0168	.5221	.01653	.81891	34
27	.18138	.98341	.18444	.4219	.0169	.5134	.01659	.81862	33
28	.18166	.98336	.18474	.4131	.0169	.5047	.01664	.81834	32
29	.18195	.98331	.18504	.4043	.0170	.4960	.01669	.81805	31
30	0.18223	0.98325	0.18534	5.3955	1.0170	5.4874	0.01674	0.81776	30
31	.18252	.98320	.18564	.3868	.0171	.4788	.01680	.81748	29
32	.18281	.98315	.18594	.3780	.0171	.4702	.01685	.81719	28
33	.18309	.98309	.18624	.3694	.0172	.4617	.01690	.81691	27
34	.18338	.98304	.18654	.3607	.0172	.4532	.01696	.81662	26
35	0.18366	0.98299	0.18684	5.3521	1.0173	5.4417	0.01701	0.81633	25
36	.18395	.98293	.18714	.3434	.0174	.4362	.01706	.81605	24
37	.18424	.98288	.18745	.3349	.0174	.4278	.01712	.81576	23
38	.18452	.98283	.18775	.3263	.0175	.4194	.01717	.81548	22
39	.18481	.98277	.18805	.3178	.0175	.4110	.01722	.81519	21
40	0.18509	0.98272	0.18835	5.3093	1.0176	5.4026	0.01728	0.81490	20
41	.18538	.98267	.18865	.3008	.0176	.3943	.01733	.81462	19
42	.18567	.98261	.18895	.2923	.0177	.3860	.01739	.81433	18
43	.18595	.98256	.18925	.2839	.0177	.3777	.01744	.81405	17
44	.18624	.98250	.18955	.2755	.0178	.3695	.01749	.81376	16
45	0.18652	0.98245	0.18985	5.2671	1.0179	5.3612	0.01755	0.81348	15
46	.18681	.98240	.19016	.2538	.0179	.3530	.01760	.81319	14
47	.18709	.98234	.19046	.2505	.0180	.3449	.01766	.81290	13
48	.18738	.98229	.19076	.2422	.0180	.3367	.01771	.81262	12
49	.18767	.98223	.19106	.2339	.0181	.3286	.01777	.81233	11
50	0.18795	0.98218	0.19136	5.2257	1.0181	5.3205	0.01782	0.81205	10
51	.18824	.98212	.19166	.2174	.0182	.3124	.01788	.81176	9
52	.18852	.98207	.19197	.2092	.0182	.3044	.01793	.81147	8
53	.18881	.98201	.19227	.2011	.0183	.2963	.01799	.81119	7
54	.18909	.98196	.19257	.1929	.0184	.2883	.01804	.81090	6
55	0.18938	0.98190	0.19287	5.1848	1.0184	5.2803	0.01810	0.81062	5
56	.18967	.98185	.19317	.1767	.0185	.2724	.01815	.81033	4
57	.18995	.98179	.19347	.1686	.0185	.2645	.01821	.81005	3
58	.19024	.98174	.19378	.1606	.0186	.2565	.01826	.80976	2
59	.19052	.98168	.19408	.1525	.0186	.2487	.01832	.80948	1
60	0.19081	0.98163	0.19438	5.1445	1.0187	5.2408	0.01837	0.80919	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

100°

79°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.19081	0.98163	0.19438	5.1445	1.0187	5.2408	0.01837	0.80919	60
1	.19109	.98157	.19468	.1366	.0188	.2330	.01843	.80890	59
2	.19138	.98152	.19498	.1286	.0188	.2252	.01848	.80862	58
3	.19166	.98146	.19529	.1207	.0189	.2174	.01854	.80833	57
4	.19195	.98140	.19559	.1128	.0189	.2097	.01859	.80805	56
5	0.19224	0.98135	0.19589	5.1049	1.0190	5.2019	0.01865	0.80776	55
6	.19252	.98129	.19619	.0970	.0191	.1942	.01871	.80748	54
7	.19281	.98124	.19649	.0892	.0191	.1865	.01876	.80719	53
8	.19309	.98118	.19680	.0814	.0192	.1788	.01882	.80691	52
9	.19338	.98112	.19710	.0736	.0192	.1712	.01887	.80662	51
10	0.19366	0.98107	0.19740	5.0658	1.0193	5.1636	0.01893	0.80634	50
11	.19395	.98101	.19770	.0581	.0193	.1560	.01899	.80605	49
12	.19423	.98095	.19800	.0504	.0194	.1484	.01904	.80576	48
13	.19452	.98090	.19831	.0427	.0195	.1409	.01910	.80548	47
14	.19480	.98084	.19861	.0350	.0195	.1333	.01916	.80519	46
15	0.19509	0.98078	0.19891	5.0273	1.0196	5.1258	0.01921	0.80491	45
16	.19537	.98073	.19921	.0197	.0196	.1183	.01927	.80462	44
17	.19566	.98067	.19952	.0121	.0197	.1109	.01933	.80434	43
18	.19595	.98061	.19982	.0045	.0198	.1034	.01938	.80405	42
19	.19623	.98056	.20012	4.9969	.0198	.0960	.01944	.80377	41
20	0.19652	0.98050	0.20042	4.9594	1.0199	5.0886	0.01950	0.80348	40
21	.19680	.98044	.20073	.9819	.0199	.0812	.01956	.80320	39
22	.19709	.98039	.20103	.9744	.0200	.0739	.01961	.80291	38
23	.19737	.98033	.20133	.9669	.0201	.0666	.01967	.80263	37
24	.19766	.98027	.20163	.9594	.0201	.0593	.01973	.80234	36
25	0.19794	0.98021	0.20194	4.9320	1.0202	5.0520	0.01979	0.80206	35
26	.19823	.98016	.20224	.9446	.0202	.0447	.01984	.80177	34
27	.19851	.98010	.20254	.9372	.0203	.0375	.01990	.80149	33
28	.19880	.98004	.20285	.9298	.0204	.0302	.01996	.80120	32
29	.19908	.97998	.20315	.9225	.0204	.0230	.02002	.80092	31
30	0.19937	0.97992	0.20345	4.9151	1.0205	5.0158	0.02007	0.80063	30
31	.19965	.97987	.20375	.9078	.0205	.0087	.02013	.80035	29
32	.19994	.97981	.20406	.9006	.0206	.0015	.02019	.80006	28
33	.20022	.97975	.20436	.8933	.0207	4.9944	.02025	.79978	27
34	.20051	.97969	.20466	.8860	.0207	.9873	.02031	.79949	26
35	0.20079	0.97963	0.20497	4.8788	1.0208	4.9802	0.02037	0.79921	25
36	.20108	.97957	.20527	.8716	.0208	.9732	.02042	.79892	24
37	.20136	.97952	.20557	.8644	.0209	.9661	.02048	.79863	23
38	.20165	.97946	.20588	.8573	.0210	.9591	.02054	.79835	22
39	.20193	.97940	.20618	.8501	.0210	.9521	.02060	.79807	21
40	0.20222	0.97934	0.20648	4.8430	1.0211	4.9452	0.02066	0.79778	20
41	.20250	.97928	.20679	.8359	.0211	.9382	.02072	.79750	19
42	.20279	.97922	.20709	.8288	.0212	.9313	.02078	.79721	18
43	.20307	.97916	.20739	.8217	.0213	.9243	.02084	.79693	17
44	.20336	.97910	.20770	.8147	.0213	.9175	.02089	.79664	16
45	0.20364	0.97904	0.20800	4.8077	1.0214	4.9106	0.02095	0.79636	15
46	.20393	.97899	.20830	.8007	.0215	.9037	.02101	.79607	14
47	.20421	.97893	.20861	.7937	.0215	.8969	.02107	.79579	13
48	.20450	.97887	.20891	.7867	.0216	.8901	.02113	.79550	12
49	.20478	.97881	.20921	.7798	.0216	.8833	.02119	.79522	11
50	0.20506	0.97875	0.20952	4.7728	1.0217	4.8765	0.02125	0.79493	10
51	.20535	.97869	.20982	.7659	.0218	.8697	.02131	.79465	9
52	.20563	.97863	.21012	.7591	.0218	.8630	.02137	.79436	8
53	.20592	.97857	.21043	.7522	.0219	.8563	.02143	.79408	7
54	.20620	.97851	.21073	.7453	.0220	.8496	.02149	.79379	6
55	0.20649	0.97845	0.21104	4.7385	1.0220	4.8429	0.02155	0.79351	5
56	.20677	.97839	.21134	.7317	.0221	.8362	.02161	.79323	4
57	.20706	.97833	.21164	.7249	.0221	.8296	.02167	.79294	3
58	.20734	.97827	.21195	.7181	.0222	.8229	.02173	.79266	2
59	.20763	.97821	.21225	.7114	.0223	.8163	.02179	.79237	1
60	0.20791	0.97815	0.21256	4.7046	1.0223	4.8097	0.02185	0.79209	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

12°

Natural Trigonometric Functions

167°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.20791	0.97815	0.21256	4.7046	1.0223	4.8097	0.02185	0.79209	60
1	.20820	.97809	.21286	.6979	.0224	.8032	.02191	.79180	59
2	.20848	.97803	.21316	.6912	.0225	.7966	.02197	.79152	58
3	.20876	.97797	.21347	.6845	.0225	.7901	.02203	.79123	57
4	.20905	.97790	.21377	.6778	.0226	.7835	.02209	.79105	56
5	0.20933	0.97784	0.21408	4.6712	1.0226	4.7770	0.02215	0.79066	55
6	.20962	.97778	.21438	.6646	.0227	.7706	.02222	.79038	54
7	.20990	.97772	.21468	.6580	.0228	.7641	.02228	.79010	53
8	.21019	.97766	.21499	.6514	.0228	.7576	.02234	.78981	52
9	.21047	.97760	.21529	.6448	.0229	.7512	.02240	.78953	51
10	0.21076	0.97754	0.21560	4.6382	1.0230	4.7448	0.02246	0.78924	50
11	.21104	.97748	.21590	.6317	.0230	.7384	.02252	.78896	49
12	.21132	.97741	.21621	.6252	.0231	.7320	.02258	.78867	48
13	.21161	.97735	.21651	.6187	.0232	.7257	.02264	.78839	47
14	.21189	.97729	.21682	.6122	.0232	.7193	.02271	.78811	46
15	0.21218	0.97723	0.21712	4.6057	1.0233	4.7130	0.02277	0.78782	45
16	.21246	.97717	.21742	.5993	.0234	.7067	.02283	.78754	44
17	.21275	.97711	.21773	.5928	.0234	.7004	.02289	.78725	43
18	.21303	.97704	.21803	.5864	.0235	.6942	.02295	.78697	42
19	.21331	.97698	.21834	.5800	.0235	.6879	.02302	.78668	41
20	0.21360	0.97692	0.21864	4.5736	1.0236	4.6817	0.02308	0.78640	40
21	.21388	.97686	.21895	.5673	.0237	.6754	.02314	.78612	39
22	.21417	.97680	.21925	.5609	.0237	.6692	.02320	.78583	38
23	.21445	.97673	.21956	.5546	.0238	.6631	.02326	.78555	37
24	.21473	.97667	.21986	.5483	.0239	.6569	.02333	.78526	36
25	0.21502	0.97661	0.22017	4.5420	1.0239	4.6507	0.02339	0.78508	35
26	.21530	.97655	.22047	.5357	.0240	.6446	.02345	.78470	34
27	.21559	.97648	.22078	.5294	.0241	.6385	.02351	.78441	33
28	.21587	.97642	.22108	.5232	.0241	.6324	.02358	.78413	32
29	.21615	.97636	.22139	.5169	.0242	.6263	.02364	.78384	31
30	0.21644	0.97630	0.22169	4.5107	1.0243	4.6201	0.02370	0.78356	30
31	.21672	.97623	.22200	.5045	.0243	.6142	.02377	.78328	29
32	.21701	.97617	.22230	.4983	.0244	.6081	.02383	.78299	28
33	.21729	.97611	.22261	.4921	.0245	.6021	.02389	.78271	27
34	.21757	.97604	.22291	.4860	.0245	.5961	.02396	.78242	26
35	0.21786	0.97598	0.22322	4.4799	1.0246	4.5901	0.02402	0.78214	25
36	.21814	.97592	.22353	.4737	.0247	.5841	.02408	.78186	24
37	.21843	.97585	.22383	.4676	.0247	.5782	.02415	.78154	23
38	.21871	.97579	.22414	.4615	.0248	.5722	.02421	.78129	22
39	.21899	.97573	.22444	.4555	.0249	.5663	.02427	.78100	21
40	0.21928	0.97566	0.22475	4.4494	1.0249	4.5604	0.02434	0.78072	20
41	.21956	.97560	.22505	.4434	.0250	.5545	.02440	.78043	19
42	.21985	.97553	.22536	.4373	.0251	.5486	.02446	.78015	18
43	.22013	.97547	.22566	.4313	.0251	.5428	.02453	.77987	17
44	.22041	.97541	.22597	.4253	.0252	.5369	.02459	.77959	16
45	0.22070	0.97534	0.22628	4.4194	1.0253	4.5311	0.02466	0.77930	15
46	.22098	.97528	.22658	.4134	.0253	.5253	.02472	.77902	14
47	.22126	.97521	.22689	.4074	.0254	.5195	.02479	.77873	13
48	.22155	.97515	.22719	.4015	.0255	.5137	.02485	.77845	12
49	.22183	.97508	.22750	.3956	.0255	.5079	.02491	.77817	11
50	0.22211	0.97502	0.22781	4.3897	1.0256	4.5021	0.02498	0.77788	10
51	.22240	.97495	.22811	.3838	.0257	.4964	.02504	.77760	9
52	.22268	.97489	.22842	.3779	.0257	.4907	.02511	.77732	8
53	.22297	.97483	.22872	.3721	.0258	.4850	.02517	.77703	7
54	.22325	.97476	.22903	.3662	.0259	.4793	.02524	.77675	6
55	0.22353	0.97470	0.22934	4.3604	1.0260	4.4736	0.02530	0.77647	5
56	.22382	.97463	.22964	.3546	.0260	.4679	.02537	.77618	4
57	.22410	.97457	.22995	.3488	.0261	.4623	.02543	.77590	3
58	.22438	.97450	.23025	.3430	.0262	.4566	.02550	.77561	2
59	.22467	.97443	.23056	.3372	.0262	.4510	.02556	.77533	1
60	0.22495	0.97437	0.23087	4.3315	1.0263	4.4454	0.02563	0.77505	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.22495	0.97437	0.23087	4.3315	1.0263	4.4454	0.02563	0.77505	60
1	.22523	.97430	.23117	.3257	.0264	.4398	.02569	.77476	59
2	.22552	.97424	.23148	.3200	.0264	.4342	.02576	.77448	58
3	.22580	.97417	.23179	.3143	.0265	.4287	.02583	.77420	57
4	.22608	.97411	.23209	.3086	.0266	.4231	.02589	.77391	56
5	0.22637	0.97404	0.23240	4.3029	1.0266	4.4176	0.02596	0.77363	55
6	.22665	.97398	.23270	.2972	.0267	.4121	.02602	.77335	54
7	.22693	.97391	.23301	.2916	.0268	.4065	.02609	.77306	53
8	.22722	.97384	.23332	.2859	.0268	.4011	.02616	.77278	52
9	.22750	.97378	.23363	.2803	.0269	.3956	.02622	.77250	51
10	0.22778	0.97371	0.23393	4.2747	1.0270	4.3901	0.02629	0.77221	50
11	.22807	.97364	.23424	.2691	.0271	.3847	.02635	.77193	49
12	.22835	.97357	.23455	.2635	.0271	.3792	.02642	.77165	48
13	.22863	.97351	.23485	.2579	.0272	.3738	.02649	.77136	47
14	.22892	.97344	.23516	.2524	.0273	.3684	.02655	.77108	46
15	0.22920	0.97338	0.23547	4.2468	1.0273	4.3630	0.02662	0.77080	45
16	.22948	.97331	.23577	.2413	.0274	.3576	.02669	.77052	44
17	.22977	.97324	.23608	.2358	.0275	.3522	.02675	.77023	43
18	.23005	.97318	.23639	.2303	.0276	.3469	.02682	.76995	42
19	.23033	.97311	.23670	.2248	.0276	.3415	.02689	.76967	41
20	0.23061	0.97304	0.23700	4.2193	1.0277	4.3362	0.02695	0.76938	40
21	.23090	.97298	.23731	.2139	.0278	.3309	.02702	.76910	39
22	.23118	.97291	.23762	.2084	.0278	.3256	.02709	.76882	38
23	.23146	.97284	.23793	.2030	.0279	.3203	.02716	.76853	37
24	.23175	.97277	.23823	.1976	.0280	.3150	.02722	.76825	36
25	0.23203	0.97271	0.23854	4.1921	1.0280	4.3098	0.02729	0.76797	35
26	.23231	.97264	.23885	.1867	.0281	.3045	.02736	.76769	34
27	.23260	.97257	.23916	.1814	.0282	.2993	.02743	.76740	33
28	.23288	.97250	.23946	.1760	.0283	.2941	.02749	.76712	32
29	.23316	.97244	.23977	.1706	.0283	.2888	.02756	.76684	31
30	0.23344	0.97237	0.24008	4.1653	1.0284	4.2836	0.02763	0.76655	30
31	.23373	.97230	.24039	.1600	.0285	.2785	.02770	.76627	29
32	.23401	.97223	.24069	.1546	.0285	.2733	.02777	.76599	28
33	.23429	.97216	.24100	.1493	.0286	.2681	.02783	.76571	27
34	.23458	.97210	.24131	.1440	.0287	.2630	.02790	.76542	26
35	0.23486	0.97203	0.24162	4.1388	1.0288	4.2579	0.02797	0.76514	25
36	.23514	.97196	.24192	.1335	.0288	.2527	.02804	.76486	24
37	.23542	.97189	.24223	.1282	.0289	.2476	.02811	.76457	23
38	.23571	.97182	.24254	.1230	.0290	.2425	.02818	.76429	22
39	.23599	.97175	.24285	.1178	.0291	.2375	.02824	.76401	21
40	0.23627	0.97169	0.24316	4.1126	1.0291	4.2324	0.02831	0.76373	20
41	.23655	.97162	.24346	.1073	.0292	.2273	.02838	.76344	19
42	.23684	.97155	.24377	.1022	.0293	.2223	.02845	.76316	18
43	.23712	.97148	.24408	.0970	.0293	.2173	.02852	.76288	17
44	.23740	.97141	.24439	.0918	.0294	.2122	.02859	.76260	16
45	0.23768	0.97134	0.24470	4.0867	1.0295	4.2072	0.02866	0.76231	15
46	.23797	.97127	.24501	.0815	.0296	.2022	.02873	.76203	14
47	.23825	.97120	.24531	.0764	.0296	.1972	.02880	.76175	13
48	.23853	.97113	.24562	.0713	.0297	.1923	.02886	.76147	12
49	.23881	.97106	.24593	.0662	.0298	.1873	.02893	.76118	11
50	0.23910	0.97099	0.24624	4.0611	1.0299	4.1824	0.02900	0.76090	10
51	.23938	.97092	.24655	.0560	.0299	.1774	.02907	.76062	9
52	.23966	.97085	.24686	.0509	.0300	.1725	.02914	.76034	8
53	.23994	.97079	.24717	.0458	.0301	.1676	.02921	.76005	7
54	.24023	.97072	.24747	.0408	.0302	.1627	.02928	.75977	6
55	0.24051	0.97065	0.24778	4.0358	1.0302	4.1578	0.02935	0.75949	5
56	.24079	.97058	.24809	.0307	.0303	.1529	.02942	.75921	4
57	.24107	.97051	.24840	.0257	.0304	.1481	.02949	.75892	3
58	.24136	.97044	.24871	.0207	.0305	.1432	.02956	.75864	2
59	.24164	.97037	.24902	.0157	.0305	.1384	.02963	.75836	1
60	0.24192	0.97029	0.24933	4.0108	1.0306	4.1336	0.02970	0.75808	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.24192	0.97029	0.24933	4.0108	1.0306	4.1336	0.02970	0.75808	60
1	.24220	.97022	.24964	.0058	.0307	.1287	.02977	.75779	59
2	.24249	.97015	.24995	.0009	.0308	.1239	.02984	.75751	58
3	.24277	.97008	.25025	3.9959	.0308	.1191	.02991	.75723	57
4	.24305	.97001	.25056	.9910	.0309	.1144	.02999	.75695	56
5	0.24333	0.96994	0.25087	3.9861	1.0310	4.1096	0.03006	0.75667	55
6	.24361	.96987	.25118	.9812	.0311	.1048	.03013	.75638	54
7	.24390	.96980	.25149	.9763	.0311	.1001	.03020	.75610	53
8	.24418	.96973	.25180	.9714	.0312	.0953	.03027	.75582	52
9	.24446	.96966	.25211	.9665	.0313	.0906	.03034	.75554	51
10	0.24474	0.96959	0.25242	3.9616	1.0314	4.0859	0.03041	0.75526	50
11	.24502	.96952	.25273	.9568	.0314	.0812	.03048	.75497	49
12	.24531	.96944	.25304	.9520	.0315	.0765	.03055	.75469	48
13	.24559	.96937	.25335	.9471	.0316	.0718	.03063	.75441	47
14	.24587	.96930	.25366	.9423	.0317	.0672	.03070	.75413	46
15	0.24615	0.96923	0.25397	3.9375	1.0317	4.0625	0.03077	0.75385	45
16	.24643	.96916	.25428	.9327	.0318	.0579	.03084	.75356	44
17	.24672	.96909	.25459	.9279	.0319	.0532	.03091	.75328	43
18	.24700	.96901	.25490	.9231	.0320	.0486	.03098	.75300	42
19	.24728	.96894	.25521	.9184	.0320	.0440	.03106	.75272	41
20	0.24756	0.96887	0.25552	3.9136	1.0321	4.0394	0.03113	0.75244	40
21	.24784	.96880	.25583	.9089	.0322	.0348	.03120	.75215	39
22	.24813	.96873	.25614	.9042	.0323	.0302	.03127	.75187	38
23	.24841	.96865	.25645	.8994	.0323	.0256	.03134	.75159	37
24	.24869	.96858	.25676	.8947	.0324	.0211	.03142	.75131	36
25	0.24897	0.96851	0.25707	3.8900	1.0325	4.0165	0.03149	0.75103	35
26	.24925	.96844	.25738	.8853	.0326	.0120	.03156	.75075	34
27	.24953	.96836	.25769	.8807	.0327	.0074	.03163	.75046	33
28	.24982	.96829	.25800	.8760	.0327	.0029	.03171	.75018	32
29	.25010	.96822	.25831	.8713	.0328	3.9934	.03178	.74990	31
30	0.25038	0.96815	0.25862	3.8667	1.0329	3.9939	0.03185	0.74962	30
31	.25066	.96807	.25893	.8621	.0330	.9894	.03192	.74934	29
32	.25094	.96800	.25924	.8574	.0330	.9850	.03200	.74906	28
33	.25122	.96793	.25955	.8528	.0331	.9805	.03207	.74877	27
34	.25151	.96785	.25986	.8482	.0332	.9760	.03214	.74849	26
35	0.25179	0.96778	0.26017	3.8436	1.0333	3.9716	0.03222	0.74821	25
36	.25207	.96771	.26048	.8390	.0334	.9672	.03229	.74793	24
37	.25235	.96763	.26079	.8345	.0334	.9627	.03236	.74765	23
38	.25263	.96756	.26110	.8299	.0335	.9583	.03244	.74737	22
39	.25291	.96749	.26141	.8254	.0336	.9539	.03251	.74709	21
40	0.25319	0.96741	0.26172	3.8208	1.0337	3.9495	0.03258	0.74680	20
41	.25348	.96734	.26203	.8163	.0338	.9451	.03266	.74652	19
42	.25376	.96727	.26234	.8118	.0338	.9408	.03273	.74624	18
43	.25404	.96719	.26266	.8073	.0339	.9364	.03281	.74596	17
44	.25432	.96712	.26297	.8027	.0340	.9320	.03288	.74568	16
45	0.25460	0.96704	0.26328	3.7983	1.0341	3.9277	0.03295	0.74540	15
46	.25488	.96697	.26359	.7938	.0341	.9234	.03303	.74512	14
47	.25516	.96690	.26390	.7893	.0342	.9190	.03310	.74483	13
48	.25544	.96682	.26421	.7848	.0343	.9147	.03318	.74455	12
49	.25573	.96675	.26452	.7804	.0344	.9104	.03325	.74427	11
50	0.25601	0.96667	0.26483	3.7759	1.0345	3.9061	0.03332	0.74399	10
51	.25629	.96660	.26514	.7715	.0345	.9018	.03340	.74371	9
52	.25657	.96652	.26546	.7671	.0346	.8976	.03347	.74344	8
53	.25685	.96645	.26577	.7627	.0347	.8933	.03355	.74315	7
54	.25713	.96638	.26608	.7583	.0348	.8890	.03362	.74287	6
55	0.25741	0.96630	0.26639	3.7539	1.0349	3.8843	0.03370	0.74259	5
56	.25769	.96623	.26670	.7495	.0349	.8805	.03377	.74230	4
57	.25798	.96615	.26701	.7451	.0350	.8763	.03385	.74202	3
58	.25826	.96608	.26732	.7407	.0351	.8721	.03392	.74174	2
59	.25854	.96600	.26764	.7364	.0352	.8679	.03400	.74146	1
60	0.25882	0.96592	0.26795	3.7320	1.0353	3.8637	0.03407	0.74118	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.25832	0.96592	0.26795	3.7320	1.0353	3.8637	0.03407	0.74118	60
1	.25910	.96585	.26826	.7277	.0353	.8595	.03415	.74090	59
2	.25938	.96577	.26857	.7234	.0354	.8553	.03422	.74062	58
3	.25966	.96570	.26888	.7191	.0355	.8512	.03430	.74034	57
4	.25994	.96562	.26920	.7147	.0356	.8470	.03438	.74006	56
5	0.26022	0.96555	0.26951	3.7104	1.0357	3.8428	0.03445	0.73978	55
6	.26050	.96547	.26982	.7062	.0358	.8387	.03453	.73949	54
7	.26078	.96540	.27013	.7019	.0358	.8346	.03460	.73921	53
8	.26107	.96532	.27044	.6976	.0359	.8304	.03468	.73893	52
9	.26135	.96524	.27076	.6933	.0360	.8263	.03475	.73865	51
10	0.26163	0.96517	0.27107	3.6891	1.0361	3.8222	0.03483	0.73837	50
11	.26191	.96509	.27138	.6848	.0362	.8181	.03491	.73809	49
12	.26219	.96502	.27169	.6806	.0362	.8140	.03498	.73781	48
13	.26247	.96494	.27201	.6764	.0363	.8100	.03506	.73753	47
14	.26275	.96486	.27232	.6722	.0364	.8059	.03514	.73725	46
15	0.26303	0.96479	0.27263	3.6579	1.0365	3.8018	0.03521	0.73697	45
16	.26331	.96471	.27294	.6637	.0366	.7978	.03529	.73669	44
17	.26359	.96463	.27326	.6596	.0367	.7937	.03536	.73641	43
18	.26387	.96456	.27357	.6554	.0367	.7897	.03544	.73613	42
19	.26415	.96448	.27388	.6512	.0368	.7857	.03552	.73585	41
20	0.26443	0.96440	0.27419	3.6470	1.0369	3.7816	0.03560	0.73556	40
21	.26471	.96433	.27451	.6429	.0370	.7776	.03567	.73528	39
22	.26499	.96425	.27482	.6387	.0371	.7736	.03575	.73500	38
23	.26527	.96417	.27513	.6346	.0371	.7697	.03583	.73472	37
24	.26556	.96409	.27544	.6305	.0372	.7657	.03590	.73444	36
25	0.26584	0.96402	0.27576	3.6263	1.0373	3.7617	0.03598	0.73416	35
26	.26612	.96394	.27607	.6222	.0374	.7577	.03606	.73388	34
27	.26640	.96386	.27638	.6181	.0375	.7538	.03614	.73360	33
28	.26668	.96378	.27670	.6140	.0376	.7498	.03621	.73332	32
29	.26696	.96371	.27701	.6100	.0376	.7459	.03629	.73304	31
30	0.26724	0.96363	0.27732	3.6059	1.0377	3.7420	0.03637	0.73276	30
31	.26752	.96355	.27764	.6018	.0378	.7380	.03645	.73248	29
32	.26780	.96347	.27795	.5977	.0379	.7341	.03652	.73220	28
33	.26808	.96340	.27826	.5937	.0380	.7302	.03660	.73192	27
34	.26836	.96332	.27858	.5896	.0381	.7263	.03668	.73164	26
35	0.26864	0.96324	0.27889	3.5856	1.0382	3.7224	0.03676	0.73136	25
36	.26892	.96316	.27920	.5816	.0382	.7186	.03684	.73108	24
37	.26920	.96308	.27952	.5776	.0383	.7147	.03691	.73080	23
38	.26948	.96301	.27983	.5736	.0384	.7108	.03699	.73052	22
39	.26976	.96293	.28014	.5696	.0385	.7070	.03707	.73024	21
40	0.27004	0.96285	0.28046	3.5656	1.0386	3.7031	0.03715	0.72996	20
41	.27032	.96277	.28077	.5616	.0387	.6993	.03723	.72968	19
42	.27060	.96269	.28109	.5576	.0387	.6955	.03731	.72940	18
43	.27088	.96261	.28140	.5536	.0388	.6917	.03739	.72912	17
44	.27116	.96253	.28171	.5497	.0389	.6878	.03746	.72884	16
45	0.27144	0.96245	0.28203	3.5457	1.0390	3.6840	0.03754	0.72856	15
46	.27172	.96238	.28234	.5418	.0391	.6802	.03762	.72828	14
47	.27200	.96230	.28266	.5378	.0392	.6765	.03770	.72800	13
48	.27228	.96222	.28297	.5339	.0393	.6727	.03778	.72772	12
49	.27256	.96214	.28328	.5300	.0393	.6689	.03786	.72744	11
50	0.27284	0.96206	0.28360	3.5261	1.0394	3.6651	0.03794	0.72716	10
51	.27312	.96198	.28391	.5222	.0395	.6614	.03802	.72688	9
52	.27340	.96190	.28423	.5183	.0396	.6576	.03810	.72660	8
53	.27368	.96182	.28454	.5144	.0397	.6539	.03818	.72632	7
54	.27396	.96174	.28486	.5105	.0398	.6502	.03826	.72604	6
55	0.27424	0.96166	0.28517	3.5066	1.0399	3.6464	0.03834	0.72576	5
56	.27452	.96158	.28549	.5028	.0399	.6427	.03842	.72548	4
57	.27480	.96150	.28580	.4989	.0400	.6390	.03850	.72520	3
58	.27508	.96142	.28611	.4951	.0401	.6353	.03858	.72492	2
59	.27536	.96134	.28643	.4912	.0402	.6316	.03866	.72464	1
60	0.27564	0.96126	0.28674	3.4874	1.0403	3.6279	0.03874	0.72436	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

16°

Natural Trigonometric Functions

163°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.27564	0.96126	0.28674	3.4874	1.0403	3.6279	0.03874	0.72436	60
1	.27592	.96118	.28706	.4836	.0404	.6243	.03882	.72408	59
2	.27620	.96110	.28737	.4798	.0405	.6206	.03890	.72380	58
3	.27648	.96102	.28769	.4760	.0406	.6169	.03898	.72352	57
4	.27675	.96094	.28800	.4722	.0406	.6133	.03906	.72324	56
5	0.27703	0.96086	0.28832	3.4684	1.0407	3.6096	0.03914	0.72296	55
6	.27731	.96078	.28863	.4646	.0408	.6060	.03922	.72268	54
7	.27759	.96070	.28895	.4608	.0409	.6024	.03930	.72240	53
8	.27787	.96062	.28926	.4570	.0410	.5987	.03938	.72212	52
9	.27815	.96054	.28958	.4533	.0411	.5951	.03946	.72185	51
10	0.27843	0.96045	0.28990	3.4495	1.0412	3.5915	0.03954	0.72157	50
11	.27871	.96037	.29021	.4458	.0413	.5879	.03962	.72129	49
12	.27899	.96029	.29053	.4420	.0413	.5843	.03971	.72101	48
13	.27927	.96021	.29084	.4383	.0414	.5807	.03979	.72073	47
14	.27955	.96013	.29116	.4346	.0415	.5772	.03987	.72045	46
15	0.27983	0.96005	0.29147	3.4308	1.0416	3.5736	0.03995	0.72017	45
16	.28011	.95997	.29179	.4271	.0417	.5700	.04003	.71989	44
17	.28039	.95989	.29210	.4234	.0418	.5665	.04011	.71961	43
18	.28067	.95980	.29242	.4197	.0419	.5629	.04019	.71933	42
19	.28094	.95972	.29274	.4160	.0420	.5594	.04028	.71905	41
20	0.28122	0.95964	0.29305	3.4124	1.0420	3.5559	0.04036	0.71877	40
21	.28150	.95956	.29337	.4087	.0421	.5523	.04044	.71849	39
22	.28178	.95948	.29368	.4050	.0422	.5488	.04052	.71822	38
23	.28206	.95940	.29400	.4014	.0423	.5453	.04060	.71794	37
24	.28234	.95931	.29432	.3977	.0424	.5418	.04069	.71766	36
25	0.28262	0.95923	0.29463	3.3941	1.0425	3.5383	0.04077	0.71738	35
26	.28290	.95915	.29495	.3904	.0426	.5348	.04085	.71710	34
27	.28318	.95907	.29526	.3868	.0427	.5313	.04093	.71682	33
28	.28346	.95898	.29558	.3832	.0428	.5279	.04101	.71654	32
29	.28374	.95890	.29590	.3795	.0428	.5244	.04110	.71626	31
30	0.28401	0.95882	0.29621	3.3759	1.0429	3.5209	0.04118	0.71608	30
31	.28429	.95874	.29653	.3723	.0430	.5175	.04126	.71570	29
32	.28457	.95865	.29685	.3687	.0431	.5140	.04134	.71543	28
33	.28485	.95857	.29716	.3651	.0432	.5106	.04143	.71515	27
34	.28513	.95849	.29748	.3616	.0433	.5072	.04151	.71487	26
35	0.28541	0.95840	0.29780	3.3580	1.0434	3.5037	0.04159	0.71459	25
36	.28569	.95832	.29811	.3544	.0435	.5003	.04168	.71431	24
37	.28597	.95824	.29843	.3509	.0436	.4969	.04176	.71403	23
38	.28624	.95816	.29875	.3473	.0437	.4935	.04184	.71375	22
39	.28652	.95807	.29906	.3438	.0438	.4901	.04193	.71347	21
40	0.28680	0.95799	0.29938	3.3402	1.0438	3.4867	0.04201	0.71320	20
41	.28708	.95791	.29970	.3367	.0439	.4833	.04209	.71292	19
42	.28736	.95782	.30001	.3332	.0440	.4799	.04218	.71264	18
43	.28764	.95774	.30033	.3296	.0441	.4766	.04226	.71236	17
44	.28792	.95765	.30065	.3261	.0442	.4732	.04234	.71208	16
45	0.28820	0.95757	0.30096	3.3226	1.0443	3.4698	0.04243	0.71180	15
46	.28847	.95749	.30128	.3191	.0444	.4665	.04251	.71152	14
47	.28875	.95740	.30160	.3156	.0445	.4632	.04260	.71125	13
48	.28903	.95732	.30192	.3121	.0446	.4598	.04268	.71097	12
49	.28931	.95723	.30223	.3087	.0447	.4565	.04276	.71069	11
50	0.28959	0.95715	0.30255	3.3052	1.0448	3.4532	0.04285	0.71041	10
51	.28987	.95707	.30287	.3017	.0448	.4498	.04293	.71013	9
52	.29014	.95698	.30319	.2983	.0449	.4465	.04302	.70985	8
53	.29042	.95690	.30350	.2948	.0450	.4432	.04310	.70958	7
54	.29070	.95681	.30382	.2914	.0451	.4399	.04319	.70930	6
55	0.29098	0.95673	0.30414	3.2879	1.0452	3.4366	0.04327	0.70902	5
56	.29126	.95664	.30446	.2845	.0453	.4334	.04335	.70874	4
57	.29154	.95656	.30478	.2811	.0454	.4301	.04344	.70846	3
58	.29181	.95647	.30509	.2777	.0455	.4268	.04352	.70818	2
59	.29209	.95639	.30541	.2742	.0456	.4236	.04361	.70791	1
60	0.29237	0.95630	0.30573	3.2708	1.0457	3.4203	0.04369	0.70763	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

106°

73°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.27237	0.95930	0.30573	3.2708	I.0457	3.4203	0.04369	0.70763	60
1	.27265	.95922	.30605	.2674	.0458	.4170	.04378	.70735	59
2	.27293	.95913	.30637	.2640	.0459	.4138	.04386	.70707	58
3	.27321	.95905	.30668	.2607	.0460	.4106	.04395	.70679	57
4	.27348	.95896	.30700	.2573	.0461	.4073	.04404	.70651	56
5	0.27376	0.95888	0.30732	3.2539	I.0461	3.4041	0.04412	0.70624	55
6	.27404	.95879	.30764	.2505	.0462	.4009	.04421	.70596	54
7	.27432	.95871	.30796	.2472	.0463	.3977	.04426	.70568	53
8	.27460	.95862	.30828	.2438	.0464	.3945	.04438	.70540	52
9	.27487	.95854	.30859	.2405	.0465	.3913	.04446	.70512	51
10	0.27515	0.95845	0.30891	3.2371	I.0466	3.3881	0.04455	0.70485	50
11	.27543	.95836	.30923	.2338	.0467	.3849	.04463	.70457	49
12	.27571	.95828	.30955	.2305	.0468	.3817	.04472	.70429	48
13	.27598	.95819	.30987	.2271	.0469	.3785	.04481	.70401	47
14	.27626	.95811	.31019	.2238	.0470	.3754	.04489	.70374	46
15	0.27654	0.95802	0.31051	3.2205	I.0471	3.3722	0.04498	0.70346	45
16	.27682	.95793	.31083	.2172	.0472	.3690	.04507	.70318	44
17	.27710	.95785	.31115	.2139	.0473	.3659	.04515	.70290	43
18	.27737	.95776	.31146	.2106	.0474	.3627	.04524	.70262	42
19	.27765	.95767	.31178	.2073	.0475	.3596	.04532	.70235	41
20	0.27793	0.95759	0.31210	3.2041	I.0476	3.3565	0.04541	0.70207	40
21	.27821	.95750	.31242	.2008	.0477	.3534	.04550	.70179	39
22	.27848	.95741	.31274	.1975	.0478	.3502	.04558	.70151	38
23	.27876	.95733	.31306	.1942	.0478	.3471	.04567	.70124	37
24	.27904	.95724	.31338	.1910	.0479	.3440	.04576	.70096	36
25	0.27932	0.95715	0.31370	3.1877	I.0480	3.3409	0.04585	0.70068	35
26	.27959	.95707	.31402	.1845	.0481	.3378	.04593	.70040	34
27	.27987	.95698	.31434	.1813	.0482	.3347	.04602	.70013	33
28	.30015	.95689	.31466	.1780	.0483	.3316	.04611	.69985	32
29	.30043	.95680	.31498	.1748	.0484	.3286	.04619	.69957	31
30	0.30070	0.95672	0.31530	3.1716	I.0485	3.3255	0.04628	0.69929	30
31	.30098	.95663	.31562	.1684	.0486	.3224	.04637	.69902	29
32	.30126	.95654	.31594	.1652	.0487	.3194	.04646	.69874	28
33	.30154	.95645	.31626	.1620	.0488	.3163	.04654	.69846	27
34	.30181	.95637	.31658	.1588	.0489	.3133	.04663	.69818	26
35	0.30209	0.95628	0.31690	3.1556	I.0490	3.3102	0.04672	0.69791	25
36	.30237	.95619	.31722	.1524	.0491	.3072	.04681	.69763	24
37	.30265	.95610	.31754	.1492	.0492	.3042	.04690	.69735	23
38	.30292	.95601	.31786	.1460	.0493	.3011	.04698	.69707	22
39	.30320	.95593	.31818	.1429	.0494	.2981	.04707	.69680	21
40	0.30348	0.95584	0.31850	3.1397	I.0495	3.2951	0.04716	0.69652	20
41	.30375	.95575	.31882	.1366	.0496	.2921	.04725	.69624	19
42	.30403	.95566	.31914	.1334	.0497	.2891	.04734	.69597	18
43	.30431	.95557	.31946	.1303	.0498	.2861	.04743	.69569	17
44	.30459	.95548	.31978	.1271	.0499	.2831	.04751	.69541	16
45	0.30486	0.95539	0.32010	3.1240	I.0500	3.2801	0.04760	0.69513	15
46	.30514	.95531	.32042	.1209	.0501	.2772	.04769	.69486	14
47	.30542	.95522	.32074	.1177	.0502	.2742	.04778	.69458	13
48	.30569	.95513	.32106	.1146	.0503	.2712	.04787	.69430	12
49	.30597	.95504	.32138	.1115	.0504	.2683	.04796	.69403	11
50	0.30625	0.95495	0.32171	3.1084	I.0505	3.2653	0.04805	0.69375	10
51	.30653	.95486	.32203	.1053	.0506	.2624	.04814	.69347	9
52	.30680	.95477	.32235	.1022	.0507	.2594	.04823	.69320	8
53	.30708	.95468	.32267	.0991	.0508	.2565	.04832	.69292	7
54	.30736	.95459	.32299	.0960	.0509	.2535	.04840	.69264	6
55	0.30763	0.95450	0.32331	3.0930	I.0510	3.2506	0.04849	0.69237	5
56	.30791	.95441	.32363	.0899	.0511	.2477	.04858	.69209	4
57	.30819	.95432	.32395	.0868	.0512	.2448	.04867	.69181	3
58	.30846	.95424	.32428	.0838	.0513	.2419	.04876	.69154	2
59	.30874	.95415	.32460	.0807	.0514	.2390	.04885	.69126	1
60	0.30902	0.95406	0.32492	3.0777	I.0515	3.2361	0.04894	0.69098	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



18°

Natural Trigonometric Functions

161°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.30902	0.95106	0.32492	3.0777	1.0515	3.2361	0.04894	0.69098	60
1	.30929	.95097	.32524	.0746	.0516	.2332	.04903	.69071	59
2	.30957	.95088	.32556	.0716	.0517	.2303	.04912	.69043	58
3	.30985	.95079	.32588	.0686	.0518	.2274	.04921	.69015	57
4	.31012	.95070	.32621	.0655	.0519	.2245	.04930	.68988	56
5	0.31040	0.95061	0.32653	3.0625	1.0520	3.2216	0.04939	0.68960	55
6	.31063	.95051	.32685	.0595	.0521	.2188	.04948	.68932	54
7	.31095	.95042	.32717	.0565	.0522	.2159	.04957	.68905	53
8	.31123	.95033	.32749	.0535	.0523	.2131	.04966	.68877	52
9	.31150	.95024	.32782	.0505	.0524	.2102	.04975	.68849	51
10	0.31178	0.95015	0.32814	3.0475	1.0525	3.2074	0.04985	0.68822	50
11	.31206	.95006	.32846	.0445	.0526	.2045	.04994	.68794	49
12	.31233	.94997	.32878	.0415	.0527	.2017	.05003	.68766	48
13	.31261	.94988	.32910	.0385	.0528	.1989	.05012	.68739	47
14	.31289	.94979	.32943	.0355	.0529	.1960	.05021	.68711	46
15	0.31316	0.94970	0.32975	3.0326	1.0530	3.1932	0.05030	0.68684	45
16	.31344	.94961	.33007	.0296	.0531	.1904	.05039	.68656	44
17	.31372	.94952	.33039	.0267	.0532	.1876	.05048	.68628	43
18	.31399	.94942	.33072	.0237	.0533	.1848	.05057	.68601	42
19	.31427	.94933	.33104	.0208	.0534	.1820	.05066	.68573	41
20	0.31454	0.94924	0.33136	3.0178	1.0535	3.1792	0.05076	0.68545	40
21	.31482	.94915	.33169	.0149	.0536	.1764	.05085	.68518	39
22	.31510	.94906	.33201	.0120	.0537	.1736	.05094	.68490	38
23	.31537	.94897	.33233	.0090	.0538	.1708	.05103	.68463	37
24	.31565	.94888	.33265	.0061	.0539	.1681	.05112	.68435	36
25	0.31592	0.94878	0.33298	3.0032	1.0540	3.1653	0.05121	0.68407	35
26	.31620	.94869	.33330	.0003	.0541	.1625	.05131	.68380	34
27	.31648	.94860	.33362	.2.9974	.0542	.1598	.05140	.68352	33
28	.31675	.94851	.33395	.9945	.0543	.1570	.05149	.68325	32
29	.31703	.94841	.33427	.9916	.0544	.1543	.05158	.68297	31
30	0.31730	0.94832	0.33459	2.9837	1.0545	3.1515	0.05168	0.68269	30
31	.31758	.94823	.33492	.9858	.0546	.1488	.05177	.68242	29
32	.31786	.94814	.33524	.9829	.0547	.1461	.05186	.68214	28
33	.31813	.94805	.33557	.9800	.0548	.1433	.05195	.68187	27
34	.31841	.94795	.33589	.9772	.0549	.1406	.05205	.68159	26
35	0.31868	0.94786	0.33621	2.9743	1.0550	3.1379	0.05214	0.68132	25
36	.31896	.94777	.33654	.9714	.0551	.1352	.05223	.68104	24
37	.31923	.94767	.33686	.9686	.0552	.1325	.05232	.68076	23
38	.31951	.94758	.33718	.9657	.0553	.1298	.05242	.68049	22
39	.31978	.94749	.33751	.9629	.0554	.1271	.05251	.68021	21
40	0.32006	0.94740	0.33783	2.9600	1.0555	3.1244	0.05260	0.67994	20
41	.32034	.94730	.33816	.9572	.0556	.1247	.05270	.67966	19
42	.32061	.94721	.33848	.9544	.0557	.1190	.05279	.67939	18
43	.32089	.94712	.33880	.9515	.0558	.1163	.05288	.67911	17
44	.32116	.94702	.33913	.9487	.0559	.1137	.05297	.67884	16
45	0.32144	0.94693	0.33945	2.9459	1.0560	3.1110	0.05307	0.67856	15
46	.32171	.94684	.33978	.9431	.0561	.1083	.05316	.67828	14
47	.32199	.94674	.34010	.9403	.0562	.1057	.05326	.67801	13
48	.32226	.94665	.34043	.9375	.0563	.1030	.05335	.67773	12
49	.32254	.94655	.34075	.9347	.0565	.1004	.05344	.67746	11
50	0.32282	0.94646	0.34108	2.9319	1.0566	3.0977	0.05354	0.67718	10
51	.32309	.94637	.34140	.9291	.0567	.0951	.05363	.67691	9
52	.32337	.94627	.34173	.9263	.0568	.0925	.05373	.67663	8
53	.32364	.94618	.34205	.9235	.0569	.0898	.05382	.67636	7
54	.32392	.94608	.34238	.9208	.0570	.0872	.05391	.67608	6
55	0.32419	0.94599	0.34270	2.9180	1.0571	3.0846	0.05401	0.67581	5
56	.32447	.94590	.34303	.9152	.0572	.0820	.05410	.67553	4
57	.32474	.94580	.34335	.9125	.0573	.0793	.05420	.67526	3
58	.32502	.94571	.34368	.9097	.0574	.0767	.05429	.67499	2
59	.32529	.94561	.34400	.9069	.0575	.0741	.05439	.67471	1
60	0.32557	0.94552	0.34433	2.9042	1.0576	3.0715	0.05448	0.67443	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

108°

71°



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.32557	0.94552	0.34433	2.9042	1.0576	3.0715	0.05448	0.67443	60
1	.32584	.94542	.34465	.9015	.0577	.0690	.05458	.67416	59
2	.32612	.94533	.34498	.8937	.0578	.0664	.05467	.67388	58
3	.32639	.94523	.34530	.8860	.0579	.0638	.05476	.67361	57
4	.32667	.94514	.34563	.8783	.0580	.0612	.05486	.67333	56
5	0.32694	0.94504	0.34595	2.8905	1.0581	3.0586	0.05495	0.67306	55
6	.32722	.94495	.34628	.8878	.0582	.0561	.05505	.67278	54
7	.32749	.94485	.34661	.8851	.0584	.0535	.05515	.67251	53
8	.32777	.94476	.34693	.8824	.0585	.0509	.05524	.67223	52
9	.32804	.94466	.34726	.8797	.0586	.0484	.05534	.67196	51
10	0.32832	0.94457	0.34758	2.8770	1.0587	3.0458	0.05543	0.67168	50
11	.32859	.94447	.34791	.8743	.0588	.0433	.05553	.67141	49
12	.32887	.94438	.34824	.8716	.0589	.0407	.05562	.67113	48
13	.32914	.94428	.34856	.8689	.0590	.0382	.05572	.67086	47
14	.32942	.94418	.34889	.8662	.0591	.0357	.05581	.67058	46
15	0.32969	0.94409	0.34921	2.8636	1.0592	3.0331	0.05591	0.67031	45
16	.32996	.94399	.34954	.8609	.0593	.0306	.05601	.67003	44
17	.33024	.94390	.34987	.8582	.0594	.0281	.05610	.66976	43
18	.33051	.94380	.35019	.8555	.0595	.0256	.05620	.66948	42
19	.33079	.94370	.35052	.8529	.0596	.0231	.05629	.66921	41
20	0.33106	0.94361	0.35085	2.8502	1.0598	3.0206	0.05639	0.66894	40
21	.33134	.94351	.35117	.8476	.0599	.0181	.05649	.66866	39
22	.33161	.94341	.35150	.8449	.0600	.0156	.05658	.66839	38
23	.33189	.94332	.35183	.8423	.0601	.0131	.05668	.66811	37
24	.33216	.94322	.35215	.8396	.0602	.0106	.05678	.66784	36
25	0.33243	0.94313	0.35248	2.8370	1.0603	3.0081	0.05687	0.66756	35
26	.33271	.94303	.35281	.8344	.0604	.0056	.05697	.66729	34
27	.33298	.94293	.35314	.8318	.0605	.0031	.05707	.66701	33
28	.33326	.94283	.35346	.8291	.0606	.0007	.05716	.66674	32
29	.33353	.94274	.35379	.8265	.0607	2.9982	.05726	.66647	31
30	0.33381	0.94264	0.35412	2.8239	1.0608	2.9957	0.05736	0.66619	30
31	.33408	.94254	.35445	.8213	.0609	.9933	.05745	.66592	29
32	.33435	.94245	.35477	.8187	.0611	.9908	.05755	.66564	28
33	.33463	.94235	.35510	.8161	.0612	.9884	.05765	.66537	27
34	.33490	.94225	.35543	.8135	.0613	.9859	.05775	.66510	26
35	0.33518	0.94215	0.35576	2.8109	1.0614	2.9835	0.05784	0.66482	25
36	.33545	.94206	.35608	.8083	.0615	.9810	.05794	.66455	24
37	.33572	.94196	.35641	.8057	.0616	.9786	.05804	.66427	23
38	.33600	.94186	.35674	.8032	.0617	.9762	.05814	.66400	22
39	.33627	.94176	.35707	.8006	.0618	.9738	.05823	.66373	21
40	0.33655	0.94167	0.35739	2.7980	1.0619	2.9713	0.05833	0.66345	20
41	.33682	.94157	.35772	.7954	.0620	.9689	.05843	.66318	19
42	.33709	.94147	.35805	.7929	.0622	.9665	.05853	.66290	18
43	.33737	.94137	.35838	.7903	.0623	.9641	.05863	.66263	17
44	.33764	.94127	.35871	.7878	.0624	.9617	.05872	.66236	16
45	0.33792	0.94118	0.35904	2.7852	1.0625	2.9593	0.05882	0.66208	15
46	.33819	.94108	.35936	.7827	.0626	.9569	.05892	.66181	14
47	.33846	.94098	.35969	.7801	.0627	.9545	.05902	.66153	13
48	.33874	.94088	.36002	.7776	.0628	.9521	.05912	.66126	12
49	.33901	.94078	.36035	.7751	.0629	.9497	.05922	.66099	11
50	0.33928	0.94068	0.36068	2.7725	1.0630	2.9474	0.05932	0.66071	10
51	.33956	.94058	.36101	.7700	.0632	.9450	.05941	.66044	9
52	.33983	.94049	.36134	.7675	.0633	.9426	.05951	.66017	8
53	.34011	.94039	.36167	.7650	.0634	.9402	.05961	.65989	7
54	.34038	.94029	.36199	.7625	.0635	.9379	.05971	.65962	6
55	0.34065	0.94019	0.36232	2.7600	1.0636	2.9355	0.05981	0.65935	5
56	.34093	.94009	.36265	.7575	.0637	.9332	.05991	.65907	4
57	.34120	.93999	.36298	.7550	.0638	.9308	.06001	.65880	3
58	.34147	.93989	.36331	.7525	.0639	.9285	.06011	.65853	2
59	.34175	.93979	.36364	.7500	.0641	.9261	.06021	.65825	1
60	0.34202	0.93969	0.36397	2.7475	1.0642	2.9233	0.06031	0.65798	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.34202	0.93969	0.36397	2.7475	1.0642	2.9238	0.06031	0.65798	60
1	.34229	.93959	.36430	.7450	.0643	.9215	.06041	.65771	59
2	.34257	.93949	.36463	.7425	.0644	.9191	.06051	.65743	58
3	.34284	.93939	.36496	.7400	.0645	.9168	.06061	.65716	57
4	.34311	.93929	.36529	.7376	.0646	.9145	.06071	.65689	56
5	0.34339	0.93919	0.36562	2.7351	1.0647	2.9122	0.06080	0.65661	55
6	.34366	.93909	.36595	.7326	.0648	.9098	.06090	.65634	54
7	.34393	.93899	.36628	.7302	.0650	.9075	.06100	.65607	53
8	.34421	.93889	.36661	.7277	.0651	.9052	.06110	.65579	52
9	.34448	.93879	.36694	.7252	.0652	.9029	.06121	.65552	51
10	0.34475	0.93869	0.36727	2.7228	1.0653	2.9006	0.06131	0.65525	50
11	.34502	.93859	.36760	.7204	.0654	.8983	.06141	.65497	49
12	.34530	.93849	.36793	.7179	.0655	.8960	.06151	.65470	48
13	.34557	.93839	.36826	.7155	.0656	.8937	.06161	.65443	47
14	.34584	.93829	.36859	.7130	.0658	.8915	.06171	.65415	46
15	0.34612	0.93819	0.36892	2.7106	1.0659	2.8392	0.06181	0.65388	45
16	.34639	.93809	.36925	.7082	.0660	.8869	.06191	.65361	44
17	.34666	.93799	.36958	.7058	.0661	.8846	.06201	.65334	43
18	.34693	.93789	.36991	.7033	.0662	.8824	.06211	.65306	42
19	.34721	.93779	.37024	.7009	.0663	.8801	.06221	.65279	41
20	0.34748	0.93769	0.37057	2.6985	1.0664	2.8778	0.06231	0.65252	40
21	.34775	.93758	.37090	.6961	.0666	.8756	.06241	.65225	39
22	.34803	.93748	.37123	.6937	.0667	.8733	.06251	.65197	38
23	.34830	.93738	.37156	.6913	.0668	.8711	.06262	.65170	37
24	.34857	.93728	.37190	.6889	.0669	.8688	.06272	.65143	36
25	0.34884	0.93718	0.37223	2.6865	1.0670	2.8666	0.06282	0.65115	35
26	.34912	.93708	.37256	.6841	.0671	.8644	.06292	.65088	34
27	.34939	.93698	.37289	.6817	.0673	.8621	.06302	.65061	33
28	.34966	.93687	.37322	.6794	.0674	.8599	.06312	.65034	32
29	.34993	.93677	.37355	.6770	.0675	.8577	.06323	.65006	31
30	0.35021	0.93667	0.37388	2.6746	1.0676	2.8554	0.06333	0.64979	30
31	.35048	.93657	.37422	.6722	.0677	.8532	.06343	.64952	29
32	.35075	.93647	.37455	.6699	.0678	.8510	.06353	.64925	28
33	.35102	.93637	.37488	.6675	.0679	.8488	.06363	.64897	27
34	.35130	.93626	.37521	.6652	.0681	.8466	.06373	.64870	26
35	0.35157	0.93616	0.37554	2.6628	1.0682	2.8444	0.06384	0.64843	25
36	.35184	.93606	.37587	.6604	.0683	.8442	.06394	.64816	24
37	.35211	.93596	.37621	.6581	.0684	.8400	.06404	.64789	23
38	.35239	.93585	.37654	.6558	.0685	.8378	.06414	.64761	22
39	.35266	.93575	.37687	.6534	.0686	.8356	.06425	.64734	21
40	0.35293	0.93565	0.37720	2.6511	1.0688	2.8334	0.06435	0.64707	20
41	.35320	.93555	.37754	.6487	.0689	.8312	.06445	.64680	19
42	.35347	.93544	.37787	.6464	.0690	.8290	.06456	.64652	18
43	.35375	.93534	.37820	.6441	.0691	.8269	.06466	.64625	17
44	.35402	.93524	.37853	.6418	.0692	.8247	.06476	.64598	16
45	0.35429	0.93513	0.37887	2.6394	1.0694	2.8225	0.06486	0.64571	15
46	.35456	.93503	.37920	.6371	.0695	.8204	.06497	.64544	14
47	.35483	.93493	.37953	.6348	.0696	.8182	.06507	.64516	13
48	.35511	.93482	.37986	.6325	.0697	.8160	.06517	.64489	12
49	.35538	.93472	.38020	.6302	.0698	.8139	.06528	.64462	11
50	0.35565	0.93462	0.38053	2.6279	1.0699	2.8117	0.06538	0.64435	10
51	.35592	.93451	.38086	.6256	.0701	.8096	.06548	.64408	9
52	.35619	.93441	.38120	.6233	.0702	.8074	.06559	.64380	8
53	.35647	.93431	.38153	.6210	.0703	.8053	.06569	.64353	7
54	.35674	.93420	.38186	.6187	.0704	.8032	.06579	.64326	6
55	0.35701	0.93410	0.38220	2.6164	1.0705	2.8010	0.06590	0.64299	5
56	.35728	.93400	.38253	.6142	.0707	.7989	.06600	.64272	4
57	.35755	.93389	.38286	.6119	.0708	.7968	.06611	.64245	3
58	.35782	.93379	.38320	.6096	.0709	.7947	.06621	.64217	2
59	.35810	.93368	.38353	.6073	.0710	.7925	.06631	.64190	1
60	0.35837	0.93358	0.38386	2.6051	1.0711	2.7904	0.06642	0.64163	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.35337	0.93353	0.38386	2.6051	1.0711	2.7904	0.06642	0.64163	60
1	.35364	.93343	.38420	.6028	.0713	.7833	.06652	.64136	59
2	.35391	.93337	.38453	.6006	.0714	.7862	.06663	.64109	58
3	.35913	.93327	.38486	.5983	.0715	.7841	.06673	.64082	57
4	.35945	.93316	.38520	.5960	.0716	.7820	.06684	.64055	56
5	0.35972	0.93306	0.38553	2.5938	1.0717	2.7799	0.06694	0.64027	55
6	.36000	.93295	.38587	.5916	.0719	.7778	.06705	.64000	54
7	.36027	.93285	.38620	.5893	.0720	.7757	.06715	.63973	53
8	.36054	.93274	.38654	.5871	.0721	.7736	.06726	.63946	52
9	.36081	.93264	.38687	.5848	.0722	.7715	.06736	.63919	51
10	0.36108	0.93253	0.38720	2.5826	1.0723	2.7694	0.06747	0.63892	50
11	.36135	.93243	.38754	.5804	.0725	.7674	.06757	.63865	49
12	.36162	.93232	.38787	.5781	.0726	.7653	.06768	.63837	48
13	.36189	.93222	.38821	.5759	.0727	.7632	.06778	.63810	47
14	.36217	.93.11	.38854	.5737	.0728	.7611	.06789	.63783	46
15	0.36244	0.93201	0.38888	2.5715	1.0729	2.7591	0.06799	0.63756	45
16	.36271	.93190	.38921	.5693	.0731	.7570	.06810	.63729	44
17	.36298	.93180	.38955	.5671	.0732	.7550	.06820	.63702	43
18	.36325	.93169	.38988	.5649	.0733	.7529	.06831	.63675	42
19	.36352	.93158	.39022	.5627	.0734	.7509	.06841	.63648	41
20	0.36379	0.93148	0.39055	2.5605	1.0736	2.7488	0.06852	0.63621	40
21	.36406	.93137	.39089	.5583	.0737	.7468	.06863	.63593	39
22	.36433	.93127	.39122	.5561	.0738	.7447	.06873	.63566	38
23	.36460	.93116	.39156	.5539	.0739	.7427	.06884	.63539	37
24	.36488	.93105	.39189	.5517	.0740	.7406	.06894	.63512	36
25	0.36515	0.93095	0.39223	2.5495	1.0742	2.7386	0.06905	0.63485	35
26	.36542	.93084	.39257	.5473	.0743	.7366	.06916	.63458	34
27	.36569	.93074	.39290	.5451	.0744	.7346	.06926	.63431	33
28	.36596	.93063	.39324	.5430	.0745	.7325	.06937	.63404	32
29	.36623	.93052	.39357	.5408	.0747	.7305	.06947	.63377	31
30	0.36650	0.93042	0.39391	2.5386	1.0748	2.7285	0.06958	0.63350	30
31	.36677	.93031	.39425	.5365	.0749	.7265	.06969	.63323	29
32	.36704	.93020	.39458	.5343	.0750	.7245	.06979	.63296	28
33	.36731	.93010	.39492	.5322	.0751	.7225	.06990	.63269	27
34	.36758	.92999	.39525	.5300	.0753	.7205	.07001	.63242	26
35	0.36785	0.92988	0.39559	2.5278	1.0754	2.7185	0.07012	0.63214	25
36	.36812	.92978	.39593	.5257	.0755	.7165	.07022	.63187	24
37	.36839	.92967	.39626	.5236	.0756	.7145	.07033	.63160	23
38	.36866	.92956	.39660	.5214	.0758	.7125	.07044	.63133	22
39	.36893	.92945	.39694	.5193	.0759	.7105	.07054	.63106	21
40	0.36921	0.92935	0.39727	2.5171	1.0760	2.7085	0.07065	0.63079	20
41	.36948	.92924	.39761	.5150	.0761	.7065	.07076	.63052	19
42	.36975	.92913	.39795	.5129	.0763	.7045	.07087	.63025	18
43	.37002	.92902	.39828	.5108	.0764	.7026	.07097	.62998	17
44	.37029	.92892	.39862	.5086	.0765	.7006	.07108	.62971	16
45	0.37056	0.92881	0.39896	2.5065	1.0766	2.6986	0.07119	0.62944	15
46	.37083	.92870	.39930	.5044	.0768	.6967	.07130	.62917	14
47	.37110	.92859	.39963	.5023	.0769	.6947	.07141	.62890	13
48	.37137	.92848	.39997	.5002	.0770	.6927	.07151	.62863	12
49	.37164	.92838	.40031	.4981	.0771	.6908	.07162	.62836	11
50	0.37191	0.92827	0.40065	2.4960	1.0773	2.6888	0.07173	0.62809	10
51	.37218	.92816	.40098	.4939	.0774	.6869	.07184	.62782	9
52	.37245	.92805	.40132	.4918	.0775	.6849	.07195	.62755	8
53	.37272	.92794	.40166	.4897	.0776	.6830	.07205	.62728	7
54	.37299	.92784	.40200	.4876	.0778	.6810	.07216	.62701	6
55	0.37326	0.92773	0.40233	2.4855	1.0779	2.6791	0.07227	0.62674	5
56	.37353	.92762	.40267	.4834	.0780	.6772	.07238	.62647	4
57	.37380	.92751	.40301	.4813	.0781	.6752	.07249	.62620	3
58	.37407	.92740	.40335	.4792	.0783	.6733	.07260	.62593	2
59	.37434	.92729	.40369	.4772	.0784	.6714	.07271	.62566	1
60	0.37461	0.92718	0.40403	2.4751	1.0785	2.6695	0.07282	0.62539	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.37461	0.92718	0.40403	2.4751	1.0785	2.6695	0.07282	0.62539	60
1	.37488	.92707	.40436	.4730	.0787	.6675	.07292	.62512	59
2	.37514	.92696	.40470	.4709	.0788	.6656	.07303	.62485	58
3	.37541	.92686	.40504	.4689	.0789	.6637	.07314	.62458	57
4	.37568	.92675	.40538	.4668	.0790	.6618	.07325	.62431	56
5	0.37595	0.92664	0.40572	2.4647	1.0792	2.6599	0.07336	0.62404	55
6	.37622	.92653	.40606	.4627	.0793	.6580	.07347	.62377	54
7	.37649	.92642	.40640	.4606	.0794	.6561	.07358	.62351	53
8	.37676	.92631	.40673	.4586	.0795	.6542	.07369	.62324	52
9	.37703	.92620	.40707	.4565	.0797	.6523	.07380	.62297	51
10	0.37730	0.92609	0.40741	2.4545	1.0798	2.6504	0.07391	0.62270	50
11	.37757	.92598	.40775	.4525	.0799	.6485	.07402	.62243	49
12	.37784	.92587	.40809	.4504	.0801	.6466	.07413	.62216	48
13	.37811	.92576	.40843	.4484	.0802	.6447	.07424	.62189	47
14	.37838	.92565	.40877	.4463	.0803	.6428	.07435	.62162	46
15	0.37865	0.92554	0.40911	2.4443	1.0804	2.6410	0.07446	0.62135	45
16	.37892	.92543	.40945	.4423	.0806	.6391	.07457	.62108	44
17	.37919	.92532	.40979	.4403	.0807	.6372	.07468	.62081	43
18	.37946	.92521	.41013	.4382	.0808	.6353	.07479	.62054	42
19	.37972	.92510	.41047	.4362	.0810	.6335	.07490	.62027	41
20	0.37999	0.92499	0.41081	2.4342	1.0811	2.6316	0.07501	0.62000	40
21	.38026	.92488	.41115	.4322	.0812	.6297	.07512	.61974	39
22	.38053	.92477	.41149	.4302	.0813	.6279	.07523	.61947	38
23	.38080	.92466	.41183	.4282	.0815	.6260	.07534	.61920	37
24	.38107	.92455	.41217	.4262	.0816	.6242	.07545	.61893	36
25	0.38134	0.92443	0.41251	2.4242	1.0817	2.6223	0.07556	0.61866	35
26	.38161	.92432	.41285	.4222	.0819	.6205	.07567	.61839	34
27	.38188	.92421	.41319	.4202	.0820	.6186	.07579	.61812	33
28	.38214	.92410	.41353	.4182	.0821	.6168	.07590	.61785	32
29	.38241	.92399	.41387	.4162	.0823	.6150	.07601	.61758	31
30	0.38268	0.92388	0.41421	2.4142	1.0824	2.6131	0.07612	0.61732	30
31	.38295	.92377	.41455	.4122	.0825	.6113	.07623	.61705	29
32	.38322	.92366	.41489	.4102	.0826	.6095	.07634	.61678	28
33	.38349	.92354	.41524	.4083	.0828	.6076	.07645	.61651	27
34	.38376	.92343	.41558	.4063	.0829	.6058	.07657	.61624	26
35	0.38403	0.92332	0.41592	2.4043	1.0830	2.6040	0.07668	0.61597	25
36	.38429	.92321	.41626	.4023	.0832	.6022	.07679	.61570	24
37	.38456	.92310	.41660	.4004	.0833	.6003	.07690	.61544	23
38	.38483	.92299	.41694	.3984	.0834	.5985	.07701	.61517	22
39	.38510	.92287	.41728	.3964	.0836	.5967	.07712	.61490	21
40	0.38537	0.92276	0.41762	2.3945	1.0837	2.5949	0.07724	0.61463	20
41	.38564	.92265	.41797	.3925	.0838	.5931	.07735	.61436	19
42	.38591	.92254	.41831	.3906	.0840	.5913	.07746	.61409	18
43	.38617	.92242	.41865	.3886	.0841	.5895	.07757	.61382	17
44	.38644	.92231	.41899	.3867	.0842	.5877	.07768	.61356	16
45	0.38671	0.92220	0.41933	2.3847	1.0843	2.5859	0.07780	0.61329	15
46	.38698	.92209	.41968	.3828	.0845	.5841	.07791	.61302	14
47	.38725	.92197	.42002	.3808	.0846	.5823	.07802	.61275	13
48	.38751	.92186	.42036	.3789	.0847	.5805	.07814	.61248	12
49	.38778	.92175	.42070	.3770	.0849	.5787	.07825	.61222	11
50	0.38805	0.92164	0.42105	2.3750	1.0850	2.5770	0.07836	0.61195	10
51	.38832	.92152	.42139	.3731	.0851	.5752	.07847	.61168	9
52	.38859	.92141	.42173	.3712	.0853	.5734	.07859	.61141	8
53	.38886	.92130	.42207	.3692	.0854	.5716	.07870	.61114	7
54	.38912	.92118	.42242	.3673	.0855	.5699	.07881	.61088	6
55	0.38939	0.92107	0.42276	2.3654	1.0857	2.5681	0.07893	0.61061	5
56	.38966	.92096	.42310	.3635	.0858	.5663	.07904	.61034	4
57	.38993	.92084	.42344	.3616	.0859	.5646	.07915	.61007	3
58	.39019	.92073	.42379	.3597	.0861	.5628	.07927	.60980	2
59	.39046	.92062	.42413	.3577	.0862	.5610	.07938	.60954	1
60	0.39073	0.92050	0.42447	2.3558	1.0864	2.5593	0.07949	0.60927	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.39073	0.92050	0.42447	2.3558	1.0864	2.5593	0.07949	0.60927	60
1	.39100	.92039	.42482	.3539	.0865	.5575	.07961	.60900	59
2	.39126	.92028	.42516	.3520	.0866	.5558	.07972	.60873	58
3	.39153	.92016	.42550	.3501	.0868	.5540	.07984	.60846	57
4	.39180	.92005	.42585	.3482	.0869	.5523	.07995	.60820	56
5	0.39207	0.91993	0.42619	2.3463	1.0870	2.5506	0.08006	0.60793	55
6	.39234	.91982	.42654	.3445	.0872	.5488	.08018	.60766	54
7	.39260	.91971	.42688	.3426	.0873	.5471	.08029	.60739	53
8	.39287	.91959	.42722	.3407	.0874	.5453	.08041	.60713	52
9	.39314	.91948	.42757	.3388	.0876	.5436	.08052	.60686	51
10	0.39341	0.91936	0.42791	2.3369	1.0877	2.5419	0.08063	0.60659	50
11	.39367	.91925	.42826	.3350	.0878	.5402	.08075	.60632	49
12	.39394	.91913	.42860	.3332	.0880	.5384	.08086	.60606	48
13	.39421	.91902	.42894	.3313	.0881	.5367	.08098	.60579	47
14	.39448	.91891	.42929	.3294	.0882	.5350	.08109	.60552	46
15	0.39474	0.91879	0.42963	2.3276	1.0884	2.5333	0.08121	0.60526	45
16	.39501	.91868	.42998	.3257	.0885	.5316	.08132	.60499	44
17	.39528	.91856	.43032	.3238	.0886	.5299	.08144	.60472	43
18	.39554	.91845	.43067	.3220	.0888	.5281	.08155	.60445	42
19	.39581	.91833	.43101	.3201	.0889	.5264	.08167	.60419	41
20	0.39608	0.91822	0.43136	2.3183	1.0891	2.5247	0.08178	0.60392	40
21	.39635	.91810	.43170	.3164	.0892	.5230	.08190	.60365	39
22	.39661	.91798	.43205	.3145	.0893	.5213	.08201	.60339	38
23	.39688	.91787	.43239	.3127	.0895	.5196	.08213	.60312	37
24	.39715	.91775	.43274	.3109	.0896	.5179	.08224	.60285	36
25	0.39741	0.91764	0.43308	2.3090	1.0897	2.5163	0.08236	0.60258	35
26	.39768	.91752	.43343	.3072	.0899	.5146	.08248	.60232	34
27	.39795	.91741	.43377	.3053	.0900	.5129	.08259	.60205	33
28	.39821	.91729	.43412	.3035	.0902	.5112	.08271	.60178	32
29	.39848	.91718	.43447	.3017	.0903	.5095	.08282	.60152	31
30	0.39875	0.91706	0.43481	2.2998	1.0904	2.5078	0.08294	0.60125	30
31	.39901	.91694	.43516	.2980	.0906	.5062	.08306	.60098	29
32	.39928	.91683	.43550	.2962	.0907	.5045	.08317	.60072	28
33	.39955	.91671	.43585	.2944	.0908	.5028	.08329	.60045	27
34	.39981	.91659	.43620	.2925	.0910	.5011	.08340	.60018	26
35	0.40008	0.91648	0.43654	2.2907	1.0911	2.4995	0.08352	0.59992	25
36	.40035	.91636	.43689	.2889	.0913	.4978	.08364	.59965	24
37	.40061	.91625	.43723	.2871	.0914	.4961	.08375	.59938	23
38	.40088	.91613	.43758	.2853	.0915	.4945	.08387	.59912	22
39	.40115	.91601	.43793	.2835	.0917	.4928	.08399	.59885	21
40	0.40141	0.91590	0.43827	2.2817	1.0918	2.4912	0.08410	0.59858	20
41	.40168	.91578	.43862	.2799	.0920	.4895	.08422	.59832	19
42	.40195	.91566	.43897	.2781	.0921	.4879	.08434	.59805	18
43	.40221	.91554	.43932	.2763	.0922	.4862	.08445	.59778	17
44	.40248	.91543	.43966	.2745	.0924	.4846	.08457	.59752	16
45	0.40275	0.91531	0.44001	2.2727	1.0925	2.4829	0.08469	0.59725	15
46	.40301	.91519	.44036	.2709	.0927	.4813	.08480	.59699	14
47	.40328	.91508	.44070	.2691	.0928	.4797	.08492	.59672	13
48	.40354	.91496	.44105	.2673	.0929	.4780	.08504	.59645	12
49	.40381	.91484	.44140	.2655	.0931	.4764	.08516	.59619	11
50	0.40408	0.91472	0.44175	2.2637	1.0932	2.4748	0.08527	0.59592	10
51	.40434	.91461	.44209	.2619	.0934	.4731	.08539	.59566	9
52	.40461	.91449	.44244	.2602	.0935	.4715	.08551	.59539	8
53	.40487	.91437	.44279	.2584	.0936	.4699	.08563	.59512	7
54	.40514	.91425	.44314	.2566	.0938	.4683	.08575	.59486	6
55	0.40541	0.91414	0.44349	2.2548	1.0939	2.4668	0.08586	0.59459	5
56	.40567	.91402	.44383	.2531	.0941	.4650	.08598	.59433	4
57	.40594	.91390	.44418	.2513	.0942	.4634	.08610	.59406	3
58	.40620	.91378	.44453	.2495	.0943	.4618	.08622	.59379	2
59	.40647	.91366	.44488	.2478	.0945	.4602	.08634	.59353	1
60	0.40674	0.91354	0.44523	2.2460	1.0946	2.4586	0.08645	0.59326	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Ccs.	M
0	0.40674	0.91354	0.44523	2.2460	1.0946	2.4586	0.08645	0.59326	60
1	.40700	.91343	.44558	.2443	.0948	.4570	.08657	.59300	59
2	.40727	.91331	.44593	.2425	.0949	.4554	.08669	.59273	58
3	.40753	.91319	.44627	.2408	.0951	.4538	.08681	.59247	57
4	.40780	.91307	.44662	.2390	.0952	.4522	.08693	.59220	56
5	0.40806	0.91295	0.44697	2.2373	1.0953	2.4506	0.08705	0.59193	55
6	.40833	.91283	.44732	.2355	.0955	.4490	.08716	.59167	54
7	.40860	.91271	.44767	.2338	.0956	.4474	.08728	.59140	53
8	.40886	.91260	.44802	.2320	.0958	.4458	.08740	.59114	52
9	.40913	.91248	.44837	.2303	.0959	.4442	.08752	.59087	51
10	0.40939	0.91236	0.44872	2.2286	1.0961	2.4426	0.08764	0.59061	50
11	.40966	.91224	.44907	.2268	.0962	.4411	.08776	.59034	49
12	.40992	.91212	.44942	.2251	.0963	.4395	.08788	.59008	48
13	.41019	.91200	.44977	.2234	.0965	.4379	.08800	.58981	47
14	.41045	.91188	.45012	.2216	.0966	.4363	.08812	.58955	46
15	0.41072	0.91176	0.45047	2.2199	1.0968	2.4347	0.08824	0.58928	45
16	.41098	.91164	.45082	.2182	.0969	.4332	.08836	.58901	44
17	.41125	.91152	.45117	.2165	.0971	.4316	.08848	.58875	43
18	.41151	.91140	.45152	.2147	.0972	.4300	.08860	.58848	42
19	.41178	.91128	.45187	.2130	.0973	.4285	.08872	.58822	41
20	0.41204	0.91116	0.45222	2.2113	1.0975	2.4269	0.08884	0.58795	40
21	.41231	.91104	.45257	.2096	.0976	.4254	.08896	.58769	39
22	.41257	.91092	.45292	.2079	.0978	.4238	.08908	.58742	38
23	.41284	.91080	.45327	.2062	.0979	.4222	.08920	.58716	37
24	.41310	.91068	.45362	.2045	.0981	.4207	.08932	.58689	36
25	0.41337	0.91056	0.45397	2.2028	1.0982	2.4191	0.08944	0.58663	35
26	.41363	.91044	.45432	.2011	.0984	.4176	.08956	.58636	34
27	.41390	.91032	.45467	.1994	.0985	.4160	.08968	.58610	33
28	.41416	.91020	.45502	.1977	.0986	.4145	.08980	.58584	32
29	.41443	.91008	.45537	.1960	.0988	.4130	.08992	.58557	31
30	0.41469	0.90996	0.45573	2.1943	1.0989	2.4114	0.09004	0.58531	30
31	.41496	.90984	.45608	.1926	.0991	.4099	.09016	.58504	29
32	.41522	.90972	.45643	.1909	.0992	.4083	.09028	.58478	28
33	.41549	.90960	.45678	.1892	.0994	.4068	.09040	.58451	27
34	.41575	.90948	.45713	.1875	.0995	.4053	.09052	.58425	26
35	0.41602	0.90936	0.45748	2.1859	1.0997	2.4037	0.09064	0.58398	25
36	.41628	.90924	.45783	.1842	.0998	.4022	.09076	.58372	24
37	.41654	.90911	.45819	.1825	.1000	.4007	.09088	.58345	23
38	.41681	.90899	.45854	.1808	.1001	.3992	.09101	.58319	22
39	.41707	.90887	.45889	.1792	.1003	.3976	.09113	.58292	21
40	0.41734	0.90875	0.45924	2.1775	1.1004	2.3961	0.09125	0.58266	20
41	.41760	.90863	.45960	.1758	.1005	.3946	.09137	.58240	19
42	.41787	.90851	.45995	.1741	.1007	.3931	.09149	.58213	18
43	.41813	.90839	.46030	.1725	.1008	.3916	.09161	.58187	17
44	.41839	.90826	.46065	.1708	.1010	.3901	.09173	.58160	16
45	0.41866	0.90814	0.46101	2.1692	1.1011	2.3886	0.09186	0.58134	15
46	.41892	.90802	.46136	.1675	.1013	.3871	.09198	.58108	14
47	.41919	.90790	.46171	.1658	.1014	.3856	.09210	.58081	13
48	.41945	.90778	.46206	.1642	.1016	.3841	.09222	.58055	12
49	.41972	.90765	.46242	.1625	.1017	.3826	.09234	.58028	11
50	0.41998	0.90753	0.46277	2.1609	1.1019	2.3811	0.09247	0.58002	10
51	.42024	.90741	.46312	.1592	.1020	.3796	.09259	.57975	9
52	.42051	.90729	.46348	.1576	.1022	.3781	.09271	.57949	8
53	.42077	.90717	.46383	.1559	.1023	.3766	.09283	.57923	7
54	.42103	.90704	.46418	.1543	.1025	.3751	.09296	.57896	6
55	0.42130	0.90692	0.46454	2.1527	1.1026	2.3736	0.09308	0.57870	5
56	.42156	.90680	.46489	.1510	.1028	.3721	.09320	.57844	4
57	.42183	.90668	.46524	.1494	.1029	.3706	.09332	.57817	3
58	.42209	.90655	.46560	.1478	.1031	.3691	.09345	.57791	2
59	.42235	.90643	.46595	.1461	.1032	.3677	.09357	.57764	1
60	0.42262	0.90631	0.46631	2.1445	1.1034	2.3662	0.09369	0.57738	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.42262	0.90631	0.46631	2.1445	1.1034	2.3662	0.09369	0.57738	60
1	.42288	.90618	.46666	.1429	.1035	.3647	.09381	.57712	59
2	.42314	.90606	.46702	.1412	.1037	.3632	.09394	.57685	58
3	.42341	.90594	.46737	.1396	.1038	.3618	.09406	.57659	57
4	.42367	.90581	.46772	.1380	.1040	.3603	.09418	.57633	56
5	0.42394	0.90569	0.46808	2.1364	1.1041	2.3588	0.09431	0.57606	55
6	.42420	.90557	.46843	.1348	.1043	.3574	.09443	.57580	54
7	.42446	.90544	.46879	.1331	.1044	.3559	.09455	.57554	53
8	.42473	.90532	.46914	.1315	.1046	.3544	.09468	.57527	52
9	.42499	.90520	.46950	.1299	.1047	.3530	.09480	.57501	51
10	0.42525	0.90507	0.46985	2.1283	1.1049	2.3515	0.09492	0.57475	50
11	.42552	.90495	.47021	.1267	.1050	.3501	.09505	.57448	49
12	.42578	.90483	.47056	.1251	.1052	.3486	.09517	.57422	48
13	.42604	.90470	.47092	.1235	.1053	.3472	.09530	.57396	47
14	.42630	.90458	.47127	.1219	.1055	.3457	.09542	.57369	46
15	0.42657	0.90445	0.47163	2.1203	1.1056	2.3443	0.09554	0.57343	45
16	.42683	.90433	.47199	.1187	.1058	.3428	.09567	.57317	44
17	.42709	.90421	.47234	.1171	.1059	.3414	.09579	.57290	43
18	.42736	.90408	.47270	.1155	.1061	.3399	.09592	.57264	42
19	.42762	.90396	.47305	.1139	.1062	.3385	.09604	.57238	41
20	0.42788	0.90383	0.47341	2.1123	1.1064	2.3371	0.09617	0.57212	40
21	.42815	.90371	.47376	.1107	.1065	.3356	.09629	.57185	39
22	.42841	.90358	.47412	.1092	.1067	.3342	.09641	.57159	38
23	.42867	.90346	.47448	.1076	.1068	.3328	.09654	.57133	37
24	.42893	.90333	.47483	.1060	.1070	.3313	.09666	.57106	36
25	0.42920	0.90321	0.47519	2.1044	1.1072	2.3299	0.09679	0.57080	35
26	.42946	.90308	.47555	.1028	.1073	.3285	.09691	.57054	34
27	.42972	.90296	.47590	.1013	.1075	.3271	.09704	.57028	33
28	.42998	.90283	.47626	.0997	.1076	.3256	.09716	.57001	32
29	.43025	.90271	.47662	.0981	.1078	.3242	.09729	.56975	31
30	0.43051	0.90258	0.47697	2.0965	1.1079	2.3228	0.09741	0.56949	30
31	.43077	.90246	.47733	.0950	.1081	.3214	.09754	.56923	29
32	.43104	.90233	.47769	.0934	.1082	.3200	.09766	.56896	28
33	.43130	.90221	.47805	.0918	.1084	.3186	.09779	.56870	27
34	.43156	.90208	.47840	.0903	.1085	.3172	.09792	.56844	26
35	0.43182	0.90196	0.47876	2.0887	1.1087	2.3158	0.09804	0.56818	25
36	.43208	.90183	.47912	.0872	.1088	.3143	.09817	.56791	24
37	.43235	.90171	.47948	.0856	.1090	.3129	.09829	.56765	23
38	.43261	.90158	.47983	.0840	.1092	.3115	.09842	.56739	22
39	.43287	.90145	.48019	.0825	.1093	.3101	.09854	.56713	21
40	0.43313	0.90133	0.48055	2.0809	1.1095	2.3087	0.09867	0.56686	20
41	.43340	.90120	.48091	.0794	.1096	.3073	.09880	.56660	19
42	.43366	.90108	.48127	.0778	.1098	.3059	.09892	.56634	18
43	.43392	.90095	.48162	.0763	.1099	.3046	.09905	.56608	17
44	.43418	.90082	.48198	.0747	.1101	.3032	.09917	.56582	16
45	0.43444	0.90070	0.48234	2.0732	1.1102	2.3018	0.09930	0.56555	15
46	.43471	.90057	.48270	.0717	.1104	.3004	.09943	.56529	14
47	.43497	.90044	.48306	.0701	.1106	.2990	.09955	.56503	13
48	.43523	.90032	.48342	.0686	.1107	.2976	.09968	.56477	12
49	.43549	.90019	.48378	.0671	.1109	.2962	.09981	.56451	11
50	0.43575	0.90006	0.48414	2.0655	1.1110	2.2949	0.09993	0.56424	10
51	.43602	.89994	.48449	.0640	.1112	.2935	.10006	.56398	9
52	.43628	.89981	.48485	.0625	.1113	.2921	.10019	.56372	8
53	.43654	.89968	.48521	.0609	.1115	.2907	.10031	.56346	7
54	.43680	.89956	.48557	.0594	.1116	.2894	.10044	.56320	6
55	0.43706	0.89943	0.48593	2.0579	1.1118	2.2880	0.10057	0.56294	5
56	.43732	.89930	.48629	.0564	.1120	.2866	.10070	.56267	4
57	.43759	.89918	.48665	.0548	.1121	.2853	.10082	.56241	3
58	.43785	.89905	.48701	.0533	.1123	.2839	.10095	.56215	2
59	.43811	.89892	.48737	.0518	.1124	.2825	.10108	.56189	1
60	0.43837	0.89879	0.48773	2.0503	1.1126	2.2812	0.10121	0.56163	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.43837	0.89879	0.48773	2.0503	1.1126	2.2812	0.10121	0.56163	60
1	.43863	.89867	.48809	.0488	.1127	.2798	.10133	.56137	59
2	.43889	.89854	.48845	.0473	.1129	.2784	.10146	.56111	58
3	.43915	.89841	.48881	.0458	.1131	.2771	.10159	.56084	57
4	.43942	.89828	.48917	.0443	.1132	.2757	.10172	.56058	56
5	0.43968	0.89815	0.48953	2.0427	1.1134	2.2744	0.10184	0.56032	55
6	.43994	.89803	.48989	.0412	.1135	.2730	.10197	.56006	54
7	.44020	.89790	.49025	.0397	.1137	.2717	.10210	.55980	53
8	.44046	.89777	.49062	.0382	.1139	.2703	.10223	.55954	52
9	.44072	.89764	.49098	.0367	.1140	.2690	.10236	.55928	51
10	0.44098	0.89751	0.49134	2.0352	1.1142	2.2676	0.10248	0.55902	50
11	.44124	.89739	.49170	.0338	.1143	.2663	.10261	.55875	49
12	.44150	.89726	.49206	.0323	.1145	.2650	.10274	.55849	48
13	.44177	.89713	.49242	.0308	.1147	.2636	.10287	.55823	47
14	.44203	.89700	.49278	.0293	.1148	.2623	.10300	.55797	46
15	0.44229	0.89687	0.49314	2.0278	1.1150	2.2610	0.10313	0.55771	45
16	.44255	.89674	.49351	.0263	.1151	.2596	.10326	.55745	44
17	.44281	.89661	.49387	.0248	.1153	.2583	.10338	.55719	43
18	.44307	.89649	.49423	.0233	.1155	.2570	.10351	.55693	42
19	.44333	.89636	.49459	.0219	.1156	.2556	.10364	.55667	41
20	0.44359	0.89623	0.49495	2.0204	1.1158	2.2543	0.10377	0.55641	40
21	.44385	.89610	.49532	.0189	.1159	.2530	.10390	.55615	39
22	.44411	.89597	.49568	.0174	.1161	.2517	.10403	.55589	38
23	.44437	.89584	.49604	.0159	.1163	.2503	.10416	.55562	37
24	.44463	.89571	.49640	.0145	.1164	.2490	.10429	.55536	36
25	0.44489	0.89558	0.49677	2.0130	1.1166	2.2477	0.10442	0.55510	35
26	.44516	.89545	.49713	.0115	.1167	.2464	.10455	.55484	34
27	.44542	.89532	.49749	.0101	.1169	.2451	.10468	.55458	33
28	.44568	.89519	.49785	.0086	.1171	.2438	.10481	.55432	32
29	.44594	.89506	.49822	.0071	.1172	.2425	.10493	.55406	31
30	0.44620	0.89493	0.49858	2.0057	1.1174	2.2411	0.10506	0.55380	30
31	.44646	.89480	.49894	.0042	.1176	.2398	.10519	.55354	29
32	.44672	.89467	.49931	.0028	.1177	.2385	.10532	.55328	28
33	.44698	.89454	.49967	.0013	.1179	.2372	.10545	.55302	27
34	.44724	.89441	.50003	1.9998	.1180	.2359	.10558	.55276	26
35	0.44750	0.89428	0.50040	1.9984	1.1182	2.2346	0.10571	0.55250	25
36	.44776	.89415	.50076	.9969	.1184	.2333	.10584	.55224	24
37	.44802	.89402	.50113	.9955	.1185	.2320	.10598	.55198	23
38	.44828	.89389	.50149	.9940	.1187	.2307	.10611	.55172	22
39	.44854	.89376	.50185	.9926	.1189	.2294	.10624	.55146	21
40	0.44880	0.89363	0.50222	1.9912	1.1190	2.2282	0.10637	0.55120	20
41	.44906	.89350	.50258	.9897	.1192	.2269	.10650	.55094	19
42	.44932	.89337	.50295	.9883	.1193	.2256	.10663	.55068	18
43	.44958	.89324	.50331	.9868	.1195	.2243	.10676	.55042	17
44	.44984	.89311	.50368	.9854	.1197	.2230	.10689	.55016	16
45	0.45010	0.89298	0.50404	1.9840	1.1198	2.2217	0.10702	0.54990	15
46	.45036	.89285	.50441	.9825	.1200	.2204	.10715	.54964	14
47	.45062	.89272	.50477	.9811	.1202	.2192	.10728	.54938	13
48	.45088	.89258	.50514	.9797	.1203	.2179	.10741	.54912	12
49	.45114	.89245	.50550	.9782	.1205	.2166	.10754	.54886	11
50	0.45140	0.89232	0.50587	1.9768	1.1207	2.2153	0.10768	0.54860	10
51	.45166	.89219	.50623	.9754	.1208	.2141	.10781	.54834	9
52	.45191	.89206	.50660	.9739	.1210	.2128	.10794	.54808	8
53	.45217	.89193	.50696	.9725	.1212	.2115	.10807	.54782	7
54	.45243	.89180	.50733	.9711	.1213	.2103	.10820	.54756	6
55	0.45269	0.89166	0.50769	1.9697	1.1215	2.2090	0.10833	0.54730	5
56	.45295	.89153	.50806	.9683	.1217	.2077	.10846	.54705	4
57	.45321	.89140	.50843	.9668	.1218	.2065	.10860	.54679	3
58	.45347	.89127	.50879	.9654	.1220	.2052	.10873	.54653	2
59	.45373	.89114	.50916	.9640	.1222	.2039	.10886	.54627	1
60	0.45399	0.89101	0.50952	1.9626	1.1223	2.2027	0.10899	0.54601	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.45399	0.89101	0.50952	1.9626	1.1223	2.2027	0.10899	0.54601	60
1	.45425	.89087	.50989	.9612	.1225	.2014	.10912	.54575	59
2	.45451	.89074	.51026	.9598	.1226	.2002	.10926	.54549	58
3	.45477	.89061	.51062	.9584	.1228	.1989	.10939	.54523	57
4	.45503	.89048	.51099	.9570	.1230	.1977	.10952	.54497	56
5	0.45528	0.89034	0.51136	1.9556	1.1231	2.1964	0.10965	0.54471	55
6	.45554	.89021	.51172	.9542	.1233	.1952	.10979	.54445	54
7	.45580	.89008	.51209	.9528	.1235	.1939	.10992	.54420	53
8	.45605	.88995	.51246	.9514	.1237	.1927	.11005	.54394	52
9	.45632	.88981	.51283	.9500	.1238	.1914	.11018	.54368	51
10	0.45658	0.88968	0.51319	1.9486	1.1240	2.1902	0.11032	0.54342	50
11	.45684	.88955	.51356	.9472	.1242	.1889	.11045	.54316	49
12	.45710	.88942	.51393	.9458	.1243	.1877	.11058	.54290	48
13	.45736	.88928	.51430	.9444	.1245	.1865	.11072	.54264	47
14	.45761	.88915	.51466	.9430	.1247	.1852	.11085	.54238	46
15	0.45787	0.88902	0.51503	1.9416	1.1248	2.1840	0.11098	0.54213	45
16	.45813	.88888	.51540	.9402	.1250	.1828	.11112	.54187	44
17	.45839	.88875	.51577	.9388	.1252	.1815	.11125	.54161	43
18	.45865	.88862	.51614	.9375	.1253	.1803	.11138	.54135	42
19	.45891	.88848	.51651	.9361	.1255	.1791	.11152	.54109	41
20	0.45917	0.88835	0.51687	1.9347	1.1257	2.1778	0.11165	0.54083	40
21	.45942	.88822	.51724	.9333	.1258	.1766	.11178	.54057	39
22	.45968	.88808	.51761	.9319	.1260	.1754	.11192	.54032	38
23	.45994	.88795	.51798	.9306	.1262	.1742	.11205	.54006	37
24	.46020	.88781	.51835	.9292	.1264	.1730	.11218	.53980	36
25	0.46046	0.88768	0.51872	1.9278	1.1265	2.1717	0.11232	0.53954	35
26	.46072	.88755	.51909	.9264	.1267	.1705	.11245	.53928	34
27	.46097	.88741	.51946	.9251	.1269	.1693	.11259	.53902	33
28	.46123	.88728	.51983	.9237	.1270	.1681	.11272	.53877	32
29	.46149	.88714	.52020	.9223	.1272	.1669	.11285	.53851	31
30	0.46175	0.88701	0.52057	1.9210	1.1274	2.1657	0.11299	0.53825	30
31	.46201	.88688	.52094	.9196	.1275	.1645	.11312	.53799	29
32	.46226	.88674	.52131	.9182	.1277	.1633	.11326	.53773	28
33	.46252	.88661	.52168	.9169	.1279	.1620	.11339	.53748	27
34	.46278	.88647	.52205	.9155	.1281	.1608	.11353	.53722	26
35	0.46304	0.88634	0.52242	1.9142	1.1282	2.1596	0.11366	0.53696	25
36	.46330	.88620	.52279	.9128	.1284	.1584	.11380	.53670	24
37	.46355	.88607	.52316	.9115	.1286	.1572	.11393	.53645	23
38	.46381	.88593	.52353	.9101	.1287	.1560	.11407	.53619	22
39	.46407	.88580	.52390	.9088	.1289	.1548	.11420	.53593	21
40	0.46433	0.88566	0.52427	1.9074	1.1291	2.1536	0.11434	0.53567	20
41	.46458	.88553	.52464	.9061	.1293	.1525	.11447	.53541	19
42	.46484	.88539	.52501	.9047	.1294	.1513	.11461	.53516	18
43	.46510	.88526	.52538	.9034	.1296	.1501	.11474	.53490	17
44	.46536	.88512	.52575	.9020	.1298	.1489	.11488	.53464	16
45	0.46561	0.88499	0.52612	1.9007	1.1299	2.1477	0.11501	0.53438	15
46	.46587	.88485	.52650	.8993	.1301	.1465	.11515	.53413	14
47	.46613	.88472	.52687	.8980	.1303	.1453	.11528	.53387	13
48	.46639	.88458	.52724	.8967	.1305	.1441	.11542	.53361	12
49	.46664	.88444	.52761	.8953	.1306	.1430	.11555	.53336	11
50	0.46690	0.88431	0.52798	1.8940	1.1308	2.1418	0.11569	0.53310	10
51	.46716	.88417	.52836	.8927	.1310	.1406	.11583	.53284	9
52	.46741	.88404	.52873	.8913	.1312	.1394	.11596	.53258	8
53	.46767	.88390	.52910	.8900	.1313	.1382	.11610	.53233	7
54	.46793	.88376	.52947	.8887	.1315	.1371	.11623	.53207	6
55	0.46819	0.88363	0.52984	1.8873	1.1317	2.1359	0.11637	0.53181	5
56	.46844	.88349	.53022	.8860	.1319	.1347	.11651	.53156	4
57	.46870	.88336	.53059	.8847	.1320	.1335	.11664	.53130	3
58	.46896	.88322	.53096	.8834	.1322	.1324	.11678	.53104	2
59	.46921	.88308	.53134	.8820	.1324	.1312	.11691	.53078	1
60	0.46947	0.88295	0.53171	1.8807	1.1326	2.1300	0.11705	0.53053	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.46947	0.88295	0.53171	1.8807	1.1326	2.1300	0.11705	0.53053	60
1	.46973	.88281	.53208	.8794	.1327	.1289	.11719	.53027	59
2	.46998	.88267	.53245	.8781	.1329	.1277	.11732	.53001	58
3	.47024	.88254	.53283	.8768	.1331	.1266	.11746	.52976	57
4	.47050	.88240	.53320	.8754	.1333	.1254	.11760	.52950	56
5	0.47075	0.88226	0.53358	1.8741	1.1334	2.1242	0.11774	0.52924	55
6	.47101	.88213	.53395	.8728	.1336	.1231	.11787	.52899	54
7	.47127	.88199	.53432	.8715	.1338	.1219	.11801	.52873	53
8	.47152	.88185	.53470	.8702	.1340	.1208	.11815	.52847	52
9	.47178	.88171	.53507	.8689	.1341	.1196	.11828	.52822	51
10	0.47204	0.88158	0.53545	1.8676	1.1343	2.1185	0.11842	0.52796	50
11	.47229	.88144	.53582	.8663	.1345	.1173	.11856	.52770	49
12	.47255	.88130	.53619	.8650	.1347	.1162	.11870	.52745	48
13	.47281	.88117	.53657	.8637	.1349	.1150	.11883	.52719	47
14	.47306	.88103	.53694	.8624	.1350	.1139	.11897	.52694	46
15	0.47332	0.88089	0.53732	1.8611	1.1352	2.1127	0.11911	0.52668	45
16	.47357	.88075	.53769	.8598	.1354	.1116	.11925	.52642	44
17	.47383	.88061	.53807	.8585	.1356	.1104	.11938	.52617	43
18	.47409	.88048	.53844	.8572	.1357	.1093	.11952	.52591	42
19	.47434	.88034	.53882	.8559	.1359	.1082	.11966	.52565	41
20	0.47460	0.88020	0.53919	1.8546	1.1361	2.1070	0.11980	0.52540	40
21	.47486	.88006	.53957	.8533	.1363	.1059	.11994	.52514	39
22	.47511	.87992	.53995	.8520	.1365	.1048	.12007	.52489	38
23	.47537	.87979	.54032	.8507	.1366	.1036	.12021	.52463	37
24	.47562	.87965	.54070	.8495	.1368	.1025	.12035	.52437	36
25	0.47588	0.87951	0.54107	1.8482	1.1370	2.1014	0.12049	0.52412	35
26	.47613	.87937	.54145	.8469	.1372	.1002	.12063	.52386	34
27	.47639	.87923	.54183	.8456	.1373	.0991	.12077	.52361	33
28	.47665	.87909	.54220	.8443	.1375	.0980	.12090	.52335	32
29	.47690	.87895	.54258	.8430	.1377	.0969	.12104	.52310	31
30	0.47716	0.87882	0.54295	1.8418	1.1379	2.0957	0.12118	0.52284	30
31	.47741	.87868	.54333	.8405	.1381	.0946	.12132	.52258	29
32	.47767	.87854	.54371	.8392	.1382	.0935	.12146	.52233	28
33	.47792	.87840	.54409	.8379	.1384	.0924	.12160	.52207	27
34	.47818	.87826	.54446	.8367	.1386	.0912	.12174	.52182	26
35	0.47844	0.87812	0.54484	1.8354	1.1388	2.0901	0.12188	0.52156	25
36	.47869	.87798	.54522	.8341	.1390	.0890	.12202	.52131	24
37	.47895	.87784	.54559	.8329	.1391	.0879	.12216	.52105	23
38	.47920	.87770	.54597	.8316	.1393	.0868	.12229	.52080	22
39	.47946	.87756	.54635	.8303	.1395	.0857	.12243	.52054	21
40	0.47971	0.87742	0.54673	1.8291	1.1397	2.0846	0.12257	0.52029	20
41	.47997	.87728	.54711	.8278	.1399	.0835	.12271	.52003	19
42	.48022	.87715	.54748	.8265	.1401	.0824	.12285	.51978	18
43	.48048	.87701	.54786	.8253	.1402	.0812	.12299	.51952	17
44	.48073	.87687	.54824	.8240	.1404	.0801	.12313	.51927	16
45	0.48099	0.87673	0.54862	1.8227	1.1406	2.0790	0.12327	0.51901	15
46	.48124	.87659	.54900	.8215	.1408	.0779	.12341	.51876	14
47	.48150	.87645	.54937	.8202	.1410	.0768	.12355	.51850	13
48	.48175	.87631	.54975	.8190	.1411	.0757	.12369	.51825	12
49	.48201	.87617	.55013	.8177	.1413	.0746	.12383	.51799	11
50	0.48226	0.87603	0.55051	1.8165	1.1415	2.0735	0.12397	0.51774	10
51	.48252	.87588	.55089	.8152	.1417	.0725	.12411	.51748	9
52	.48277	.87574	.55127	.8140	.1419	.0714	.12425	.51723	8
53	.48303	.87560	.55165	.8127	.1421	.0703	.12439	.51697	7
54	.48328	.87546	.55203	.8115	.1422	.0692	.12453	.51672	6
55	0.48354	0.87532	0.55241	1.8102	1.1424	2.0681	0.12468	0.51646	5
56	.48379	.87518	.55279	.8090	.1426	.0670	.12482	.51621	4
57	.48405	.87504	.55317	.8078	.1428	.0659	.12496	.51595	3
58	.48430	.87490	.55355	.8065	.1430	.0648	.12510	.51570	2
59	.48455	.87476	.55393	.8053	.1432	.0637	.12524	.51544	1
60	0.48481	0.87462	0.55431	1.8040	1.1433	2.0627	0.12538	0.51519	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.48481	0.87462	0.55431	1.8040	1.1433	2.0627	0.12538	0.51519	60
1	.48506	.87448	.55469	.8028	.1435	.0616	.12552	.51493	59
2	.48532	.87434	.55507	.8016	.1437	.0605	.12566	.51468	58
3	.48557	.87420	.55545	.8003	.1439	.0594	.12580	.51443	57
4	.48583	.87405	.55583	.7991	.1441	.0583	.12594	.51417	56
5	0.48608	0.87391	0.55621	1.7979	1.1443	2.0573	0.12609	0.51392	55
6	.48633	.87377	.55659	.7966	.1445	.0562	.12623	.51366	54
7	.48659	.87363	.55697	.7954	.1446	.0551	.12637	.51341	53
8	.48684	.87349	.55735	.7942	.1448	.0540	.12651	.51316	52
9	.48710	.87335	.55774	.7930	.1450	.0530	.12665	.51290	51
10	0.48735	0.87320	0.55812	1.7917	1.1452	2.0519	0.12679	0.51265	50
11	.48760	.87306	.55850	.7905	.1454	.0508	.12694	.51239	49
12	.48786	.87292	.55888	.7893	.1456	.0498	.12708	.51214	48
13	.48811	.87278	.55926	.7881	.1458	.0487	.12722	.51189	47
14	.48837	.87264	.55964	.7868	.1459	.0476	.12736	.51163	46
15	0.48862	0.87250	0.56003	1.7856	1.1461	2.0466	0.12750	0.51138	45
16	.48887	.87235	.56041	.7844	.1463	.0455	.12765	.51112	44
17	.48913	.87221	.56079	.7832	.1465	.0444	.12779	.51087	43
18	.48938	.87207	.56117	.7820	.1467	.0434	.12793	.51062	42
19	.48964	.87193	.56156	.7808	.1469	.0423	.12807	.51036	41
20	0.48989	0.87178	0.56194	1.7795	1.1471	2.0413	0.12821	0.51011	40
21	.49014	.87164	.56232	.7783	.1473	.0402	.12836	.50986	39
22	.49040	.87150	.56270	.7771	.1474	.0392	.12850	.50960	38
23	.49065	.87136	.56309	.7759	.1476	.0381	.12864	.50935	37
24	.49090	.87121	.56347	.7747	.1478	.0370	.12879	.50910	36
25	0.49116	0.87107	0.56385	1.7735	1.1480	2.0360	0.12893	0.50884	35
26	.49141	.87093	.56424	.7723	.1482	.0349	.12907	.50859	34
27	.49166	.87078	.56462	.7711	.1484	.0339	.12921	.50834	33
28	.49192	.87064	.56500	.7699	.1486	.0329	.12936	.50808	32
29	.49217	.87050	.56539	.7687	.1488	.0318	.12950	.50783	31
30	0.49242	0.87035	0.56577	1.7675	1.1489	2.0308	0.12964	0.50758	30
31	.49268	.87021	.56616	.7663	.1491	.0277	.12979	.50732	29
32	.49293	.87007	.56654	.7651	.1493	.0267	.12993	.50707	28
33	.49318	.86992	.56692	.7639	.1495	.0256	.13007	.50682	27
34	.49343	.86978	.56731	.7627	.1497	.0246	.13022	.50656	26
35	0.49369	0.86964	0.56769	1.7615	1.1499	2.0256	0.13036	0.50631	25
36	.49394	.86949	.56808	.7603	.1501	.0245	.13050	.50606	24
37	.49419	.86935	.56846	.7591	.1503	.0235	.13065	.50580	23
38	.49445	.86921	.56885	.7579	.1505	.0224	.13079	.50555	22
39	.49470	.86906	.56923	.7567	.1507	.0214	.13094	.50530	21
40	0.49495	0.86892	0.56962	1.7555	1.1508	2.0204	0.13108	0.50505	20
41	.49521	.86877	.57000	.7544	.1510	.0194	.13122	.50479	19
42	.49546	.86863	.57039	.7532	.1512	.0183	.13137	.50454	18
43	.49571	.86849	.57077	.7520	.1514	.0173	.13151	.50429	17
44	.49596	.86834	.57116	.7508	.1516	.0163	.13166	.50404	16
45	0.49622	0.86820	0.57155	1.7496	1.1518	2.0152	0.13180	0.50378	15
46	.49647	.86805	.57193	.7484	.1520	.0142	.13194	.50353	14
47	.49672	.86791	.57232	.7473	.1522	.0132	.13209	.50328	13
48	.49697	.86776	.57270	.7461	.1524	.0122	.13223	.50303	12
49	.49723	.86762	.57309	.7449	.1526	.0111	.13238	.50277	11
50	0.49748	0.86748	0.57348	1.7437	1.1528	2.0101	0.13252	0.50252	10
51	.49773	.86733	.57386	.7426	.1530	.0091	.13267	.50227	9
52	.49798	.86719	.57425	.7414	.1531	.0081	.13281	.50202	8
53	.49823	.86704	.57464	.7402	.1533	.0071	.13296	.50176	7
54	.49849	.86690	.57502	.7390	.1535	.0061	.13310	.50151	6
55	0.49874	0.86675	0.57541	1.7379	1.1537	2.0050	0.13325	0.50126	5
56	.49899	.86661	.57580	.7367	.1539	.0040	.13339	.50101	4
57	.49924	.86646	.57619	.7355	.1541	.0030	.13354	.50076	3
58	.49950	.86632	.57657	.7344	.1543	.0020	.13368	.50050	2
59	.49975	.86617	.57696	.7332	.1545	.0010	.13383	.50025	1
60	0.50000	0.86603	0.57735	1.7320	1.1547	2.0000	0.13397	0.50000	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.50000	0.86603	0.57735	1.7320	1.1547	2.0000	0.13397	0.50000	60
1	.50025	.86588	.57774	.7309	.1549	1.9990	.13412	.49975	59
2	.50050	.86573	.57813	.7297	.1551	.9980	.13426	.49950	58
3	.50075	.86559	.57851	.7286	.1553	.9970	.13441	.49924	57
4	.50101	.86544	.57890	.7274	.1555	.9960	.13456	.49899	56
5	0.50126	0.86530	0.57929	1.7262	1.1557	1.9950	0.13470	0.49874	55
6	.50151	.86515	.57968	.7251	.1559	.9940	.13485	.49849	54
7	.50176	.86500	.58007	.7239	.1561	.9930	.13499	.49824	53
8	.50201	.86486	.58046	.7228	.1562	.9920	.13514	.49799	52
9	.50226	.86471	.58085	.7216	.1564	.9910	.13529	.49773	51
10	0.50252	0.86457	0.58123	1.7205	1.1566	1.9900	0.13543	0.49748	50
11	.50277	.86442	.58162	.7193	.1568	.9890	.13558	.49723	49
12	.50302	.86427	.58201	.7182	.1570	.9880	.13572	.49698	48
13	.50327	.86413	.58240	.7170	.1572	.9870	.13587	.49673	47
14	.50352	.86398	.58279	.7159	.1574	.9860	.13602	.49648	46
15	0.50377	0.86383	0.58318	1.7147	1.1576	1.9850	0.13616	0.49623	45
16	.50402	.86369	.58357	.7136	.1578	.9840	.13631	.49597	44
17	.50428	.86354	.58396	.7124	.1580	.9830	.13646	.49572	43
18	.50453	.86339	.58435	.7113	.1582	.9820	.13660	.49547	42
19	.50478	.86325	.58474	.7101	.1584	.9811	.13675	.49522	41
20	0.50503	0.86310	0.58513	1.7090	1.1586	1.9801	0.13690	0.49497	40
21	.50528	.86295	.58552	.7079	.1588	.9791	.13704	.49472	39
22	.50553	.86281	.58591	.7067	.1590	.9781	.13719	.49447	38
23	.50578	.86266	.58630	.7056	.1592	.9771	.13734	.49422	37
24	.50603	.86251	.58670	.7044	.1594	.9761	.13749	.49397	36
25	0.50628	0.86237	0.58709	1.7033	1.1596	1.9752	0.13763	0.49371	35
26	.50653	.86222	.58748	.7022	.1598	.9742	.13778	.49346	34
27	.50679	.86207	.58787	.7010	.1600	.9732	.13793	.49321	33
28	.50704	.86192	.58826	.6999	.1602	.9722	.13807	.49296	32
29	.50729	.86178	.58865	.6988	.1604	.9713	.13822	.49271	31
30	0.50754	0.86163	0.58904	1.6977	1.1606	1.9703	0.13837	0.49246	30
31	.50779	.86148	.58944	.6965	.1608	.9693	.13852	.49221	29
32	.50804	.86133	.58983	.6954	.1610	.9683	.13867	.49196	28
33	.50829	.86118	.59022	.6943	.1612	.9674	.13881	.49171	27
34	.50854	.86104	.59061	.6931	.1614	.9664	.13896	.49146	26
35	0.50879	0.86089	0.59100	1.6920	1.1616	1.9654	0.13911	0.49121	25
36	.50904	.86074	.59140	.6909	.1618	.9645	.13926	.49096	24
37	.50929	.86059	.59179	.6898	.1620	.9635	.13941	.49071	23
38	.50954	.86044	.59218	.6887	.1622	.9625	.13955	.49046	22
39	.50979	.86030	.59258	.6875	.1624	.9616	.13970	.49021	21
40	0.51004	0.86015	0.59297	1.6864	1.1626	1.9606	0.13985	0.48996	20
41	.51029	.86000	.59336	.6853	.1628	.9596	.14000	.48971	19
42	.51054	.85985	.59376	.6842	.1630	.9587	.14015	.48946	18
43	.51079	.85970	.59415	.6831	.1632	.9577	.14030	.48921	17
44	.51104	.85955	.59454	.6820	.1634	.9568	.14044	.48896	16
45	0.51129	0.85941	0.59494	1.6808	1.1636	1.9558	0.14059	0.48871	15
46	.51154	.85926	.59533	.6797	.1638	.9549	.14074	.48846	14
47	.51179	.85911	.59572	.6786	.1640	.9539	.14089	.48821	13
48	.51204	.85896	.59612	.6775	.1642	.9530	.14104	.48796	12
49	.51229	.85881	.59651	.6764	.1644	.9520	.14119	.48771	11
50	0.51254	0.85866	0.59691	1.6753	1.1646	1.9510	0.14134	0.48746	10
51	.51279	.85851	.59730	.6742	.1648	.9501	.14149	.48721	9
52	.51304	.85836	.59770	.6731	.1650	.9491	.14164	.48696	8
53	.51329	.85821	.59809	.6720	.1652	.9482	.14178	.48671	7
54	.51354	.85806	.59849	.6709	.1654	.9473	.14193	.48646	6
55	0.51379	0.85791	0.59888	1.6698	1.1656	1.9463	0.14208	0.48621	5
56	.51404	.85777	.59928	.6687	.1658	.9454	.14223	.48596	4
57	.51429	.85762	.59967	.6676	.1660	.9444	.14238	.48571	3
58	.51454	.85747	.60007	.6665	.1662	.9435	.14253	.48546	2
59	.51479	.85732	.60046	.6654	.1664	.9425	.14268	.48521	1
60	0.51504	0.85717	0.60086	1.6643	1.1666	1.9416	0.14283	0.48496	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.51504	0.85717	0.60086	1.6643	1.1666	1.9416	0.14283	0.48496	60
1	.51529	.85702	.60126	.6632	.1668	.9407	.14298	.48471	59
2	.51554	.85687	.60165	.6621	.1670	.9397	.14313	.48446	58
3	.51578	.85672	.60205	.6610	.1672	.9388	.14328	.48421	57
4	.51603	.85657	.60244	.6599	.1674	.9378	.14343	.48396	56
5	0.51628	0.85642	0.60284	1.6588	1.1676	1.9369	0.14358	0.48371	55
6	.51653	.85627	.60324	.6577	.1678	.9360	.14373	.48347	54
7	.51678	.85612	.60363	.6566	.1681	.9350	.14388	.48322	53
8	.51703	.85597	.60403	.6555	.1683	.9341	.14403	.48297	52
9	.51728	.85582	.60443	.6544	.1685	.9332	.14418	.48272	51
10	0.51753	0.85566	0.60483	1.6534	1.1687	1.9322	0.14433	0.48247	50
11	.51778	.85551	.60522	.6523	.1689	.9313	.14448	.48222	49
12	.51803	.85536	.60562	.6512	.1691	.9304	.14463	.48197	48
13	.51827	.85521	.60602	.6501	.1693	.9295	.14479	.48172	47
14	.51852	.85506	.60642	.6490	.1695	.9285	.14494	.48147	46
15	0.51877	0.85491	0.60681	1.6479	1.1697	1.9276	0.14509	0.48123	45
16	.51902	.85476	.60721	.6469	.1699	.9277	.14524	.48098	44
17	.51927	.85461	.60761	.6458	.1701	.9258	.14539	.48073	43
18	.51952	.85446	.60801	.6447	.1703	.9248	.14554	.48048	42
19	.51977	.85431	.60841	.6436	.1705	.9239	.14569	.48023	41
20	0.52002	0.85416	0.60881	1.6425	1.1707	1.9230	0.14584	0.47998	40
21	.52026	.85400	.60920	.6415	.1709	.9221	.14599	.47973	39
22	.52051	.85385	.60960	.6404	.1712	.9212	.14615	.47949	38
23	.52076	.85370	.61000	.6393	.1714	.9203	.14630	.47924	37
24	.52101	.85355	.61040	.6383	.1716	.9193	.14645	.47899	36
25	0.52126	0.85340	0.61080	1.6372	1.1718	1.9184	0.14660	0.47874	35
26	.52151	.85325	.61120	.6361	.1720	.9175	.14675	.47849	34
27	.52175	.85309	.61160	.6350	.1722	.9166	.14690	.47824	33
28	.52200	.85294	.61200	.6340	.1724	.9157	.14706	.47800	32
29	.52225	.85279	.61240	.6329	.1726	.9148	.14721	.47775	31
30	0.52250	0.85264	0.61280	1.6318	1.1728	1.9139	0.14736	0.47750	30
31	.52275	.85249	.61320	.6308	.1730	.9130	.14751	.47725	29
32	.52299	.85234	.61360	.6297	.1732	.9121	.14766	.47700	28
33	.52324	.85218	.61400	.6286	.1734	.9112	.14782	.47676	27
34	.52349	.85203	.61440	.6276	.1737	.9102	.14797	.47651	26
35	0.52374	0.85188	0.61480	1.6265	1.1739	1.9093	0.14812	0.47626	25
36	.52398	.85173	.61520	.6255	.1741	.9084	.14827	.47601	24
37	.52423	.85157	.61560	.6244	.1743	.9075	.14842	.47577	23
38	.52448	.85142	.61601	.6233	.1745	.9066	.14858	.47552	22
39	.52473	.85127	.61641	.6223	.1747	.9057	.14873	.47527	21
40	0.52498	0.85112	0.61681	1.6212	1.1749	1.9048	0.14888	0.47502	20
41	.52522	.85096	.61721	.6202	.1751	.9039	.14904	.47477	19
42	.52547	.85081	.61761	.6191	.1753	.9030	.14919	.47453	18
43	.52572	.85066	.61801	.6181	.1756	.9021	.14934	.47428	17
44	.52597	.85050	.61842	.6170	.1758	.9013	.14949	.47403	16
45	0.52621	0.85035	0.61882	1.6160	1.1760	1.9004	0.14965	0.47379	15
46	.52646	.85020	.61922	.6149	.1762	.8995	.14980	.47354	14
47	.52671	.85004	.61962	.6139	.1764	.8986	.14995	.47329	13
48	.52695	.84989	.62003	.6128	.1766	.8977	.15011	.47304	12
49	.52720	.84974	.62043	.6118	.1768	.8968	.15026	.47280	11
50	0.52745	0.84959	0.62083	1.6107	1.1770	1.8959	0.15041	0.47255	10
51	.52770	.84943	.62123	.6097	.1772	.8950	.15057	.47230	9
52	.52794	.84928	.62164	.6086	.1775	.8941	.15072	.47205	8
53	.52819	.84912	.62204	.6076	.1777	.8932	.15087	.47181	7
54	.52844	.84897	.62244	.6066	.1779	.8924	.15103	.47156	6
55	0.52868	0.84882	0.62285	1.6055	1.1781	1.8915	0.15118	0.47131	5
56	.52893	.84866	.62325	.6045	.1783	.8906	.15133	.47107	4
57	.52918	.84851	.62366	.6034	.1785	.8897	.15149	.47082	3
58	.52942	.84836	.62406	.6024	.1787	.8888	.15164	.47057	2
59	.52967	.84820	.62446	.6014	.1790	.8879	.15180	.47033	1
60	0.52992	0.84805	0.62487	1.6003	1.1792	1.8871	0.15195	0.47008	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos	M
0	0.52992	0.84805	0.62487	1.6003	1.1792	1.8871	0.15195	0.47008	60
1	.53016	.84789	.62527	.5993	.1794	.8862	.15211	.46983	59
2	.53041	.84774	.62568	.5983	.1796	.8853	.15226	.46959	58
3	.53066	.84758	.62603	.5972	.1798	.8844	.15241	.46934	57
4	.53090	.84743	.62649	.5962	.1800	.8836	.15257	.46909	56
5	0.53115	0.84728	0.62689	1.5952	1.1802	1.8827	0.15272	0.46885	55
6	.53140	.84712	.62730	.5941	.1805	.8818	.15288	.46860	54
7	.53164	.84697	.62770	.5931	.1807	.8809	.15303	.46835	53
8	.53189	.84681	.62811	.5921	.1809	.8801	.15319	.46811	52
9	.53214	.84666	.62851	.5910	.1811	.8792	.15334	.46786	51
10	0.53238	0.84650	0.62892	1.5900	1.1813	1.8783	0.15350	0.46762	50
11	.53263	.84635	.62933	.5890	.1815	.8775	.15365	.46737	49
12	.53288	.84619	.62973	.5880	.1818	.8766	.15381	.46712	48
13	.53312	.84604	.63014	.5869	.1820	.8757	.15396	.46688	47
14	.53337	.84588	.63055	.5859	.1822	.8749	.15412	.46663	46
15	0.53361	0.84573	0.63095	1.5849	1.1824	1.8740	0.15427	0.46638	45
16	.53386	.84557	.63136	.5839	.1826	.8731	.15443	.46614	44
17	.53411	.84542	.63177	.5829	.1828	.8723	.15458	.46589	43
18	.53435	.84526	.63217	.5818	.1831	.8714	.15474	.46565	42
19	.53460	.84511	.63258	.5808	.1833	.8706	.15489	.46540	41
20	0.53484	0.84495	0.63299	1.5798	1.1835	1.8697	0.15505	0.46516	40
21	.53509	.84479	.63339	.5788	.1837	.8688	.15520	.46491	39
22	.53533	.84464	.63380	.5778	.1839	.8680	.15536	.46466	38
23	.53558	.84448	.63421	.5768	.1841	.8671	.15552	.46442	37
24	.53583	.84433	.63462	.5757	.1844	.8663	.15567	.46417	36
25	0.53607	0.84417	0.63503	1.5747	1.1846	1.8654	0.15583	0.46393	35
26	.53632	.84402	.63543	.5737	.1848	.8646	.15598	.46368	34
27	.53656	.84386	.63584	.5727	.1850	.8637	.15614	.46344	33
28	.53681	.84370	.63625	.5717	.1852	.8629	.15630	.46319	32
29	.53705	.84355	.63666	.5707	.1855	.8620	.15645	.46294	31
30	0.53730	0.84339	0.63707	1.5697	1.1857	1.8611	0.15661	0.46270	30
31	.53754	.84323	.63748	.5687	.1859	.8603	.15676	.46245	29
32	.53779	.84308	.63789	.5677	.1861	.8595	.15692	.46221	28
33	.53803	.84292	.63830	.5667	.1863	.8586	.15708	.46196	27
34	.53828	.84276	.63871	.5657	.1866	.8578	.15723	.46172	26
35	0.53852	0.84261	0.63912	1.5646	1.1868	1.8569	0.15739	0.46147	25
36	.53877	.84245	.63953	.5636	.1870	.8561	.15755	.46123	24
37	.53901	.84229	.63994	.5626	.1872	.8552	.15770	.46098	23
38	.53926	.84214	.64035	.5616	.1874	.8544	.15786	.46074	22
39	.53950	.84198	.64076	.5606	.1877	.8535	.15802	.46049	21
40	0.53975	0.84182	0.64117	1.5596	1.1879	1.8527	0.15817	0.46025	20
41	.53999	.84167	.64158	.5586	.1881	.8519	.15833	.46000	19
42	.54024	.84151	.64199	.5577	.1883	.8510	.15849	.45976	18
43	.54048	.84135	.64240	.5567	.1886	.8502	.15865	.45951	17
44	.54073	.84120	.64281	.5557	.1888	.8493	.15880	.45927	16
45	0.54097	0.84104	0.64322	1.5547	1.1890	1.8485	0.15896	0.45902	15
46	.54122	.84088	.64363	.5537	.1892	.8477	.15912	.45878	14
47	.54146	.84072	.64404	.5527	.1894	.8468	.15927	.45854	13
48	.54171	.84057	.64446	.5517	.1897	.8460	.15943	.45829	12
49	.54195	.84041	.64487	.5507	.1899	.8452	.15959	.45805	11
50	0.54220	0.84025	0.64528	1.5497	1.1901	1.8443	0.15975	0.45780	10
51	.54244	.84009	.64569	.5487	.1903	.8435	.15991	.45756	9
52	.54268	.83993	.64610	.5477	.1906	.8427	.16006	.45731	8
53	.54293	.83978	.64652	.5467	.1908	.8418	.16022	.45707	7
54	.54317	.83962	.64693	.5458	.1910	.8410	.16038	.45682	6
55	0.54342	0.83946	0.64734	1.5448	1.1912	1.8402	0.16054	0.45658	5
56	.54366	.83930	.64775	.5438	.1915	.8394	.16070	.45634	4
57	.54391	.83914	.64817	.5428	.1917	.8385	.16085	.45609	3
58	.54415	.83899	.64858	.5418	.1919	.8377	.16101	.45585	2
59	.54439	.83883	.64899	.5408	.1921	.8369	.16117	.45560	1
60	0.54464	0.83867	0.64941	1.5399	1.1922	1.8361	0.16133	0.45536	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.54464	0.83867	0.64941	1.5399	1.1924	1.8361	0.16133	0.45536	60
1	.54488	.83851	.64982	.5389	.1926	.8352	.16149	.45512	59
2	.54513	.83835	.65023	.5379	.1928	.8344	.16165	.45487	58
3	.54537	.83819	.65063	.5369	.1930	.8336	.16180	.45463	57
4	.54561	.83804	.65106	.5359	.1933	.8328	.16196	.45438	56
5	0.54586	0.83788	0.65148	1.5350	1.1935	1.8320	0.16212	0.45414	55
6	.54610	.83772	.65189	.5340	.1937	.8311	.16228	.45390	54
7	.54634	.83756	.65231	.5330	.1939	.8303	.16244	.45365	53
8	.54659	.83740	.65272	.5320	.1942	.8295	.16260	.45341	52
9	.54683	.83724	.65314	.5311	.1944	.8287	.16276	.45317	51
10	0.54708	0.83708	0.65355	1.5301	1.1946	1.8279	0.16292	0.45292	50
11	.54732	.83692	.65397	.5291	.1948	.8271	.16308	.45268	49
12	.54756	.83676	.65438	.5282	.1951	.8263	.16323	.45244	48
13	.54781	.83660	.65480	.5272	.1953	.8255	.16339	.45219	47
14	.54805	.83644	.65521	.5262	.1955	.8246	.16355	.45195	46
15	0.54829	0.83629	0.65563	1.5252	1.1958	1.8238	0.16371	0.45171	45
16	.54854	.83613	.65604	.5243	.1960	.8230	.16387	.45146	44
17	.54878	.83597	.65646	.5233	.1962	.8222	.16403	.45122	43
18	.54902	.83581	.65688	.5223	.1964	.8214	.16419	.45098	42
19	.54926	.83565	.65729	.5214	.1967	.8206	.16435	.45073	41
20	0.54951	0.83549	0.65771	1.5204	1.1969	1.8198	0.16451	0.45049	40
21	.54975	.83533	.65813	.5195	.1971	.8190	.16467	.45025	39
22	.54999	.83517	.65854	.5185	.1974	.8182	.16483	.45000	38
23	.55024	.83501	.65896	.5175	.1976	.8174	.16499	.44976	37
24	.55048	.83485	.65938	.5166	.1978	.8166	.16515	.44952	36
25	0.55072	0.83469	0.65980	1.5156	1.1980	1.8158	0.16531	0.44928	35
26	.55097	.83453	.66021	.5147	.1983	.8150	.16547	.44903	34
27	.55121	.83437	.66063	.5137	.1985	.8142	.16563	.44879	33
28	.55145	.83421	.66105	.5127	.1987	.8134	.16579	.44855	32
29	.55169	.83405	.66147	.5118	.1990	.8126	.16595	.44830	31
30	0.55194	0.83388	0.66188	1.5108	1.1992	1.8118	0.16611	0.44806	30
31	.55218	.83372	.66230	.5099	.1994	.8110	.16627	.44782	29
32	.55242	.83356	.66272	.5089	.1997	.8102	.16643	.44758	28
33	.55266	.83340	.66314	.5080	.1999	.8094	.16659	.44733	27
34	.55291	.83324	.66356	.5070	.2001	.8086	.16676	.44709	26
35	0.55315	0.83308	0.66398	1.5061	1.2004	1.8078	0.16692	0.44685	25
36	.55339	.83292	.66440	.5051	.2006	.8070	.16708	.44661	24
37	.55363	.83276	.66482	.5042	.2008	.8062	.16724	.44637	23
38	.55388	.83260	.66524	.5032	.2010	.8054	.16740	.44612	22
39	.55412	.83244	.66566	.5023	.2013	.8047	.16756	.44588	21
40	0.55436	0.83228	0.66608	1.5013	1.2015	1.8039	0.16772	0.44564	20
41	.55460	.83211	.66650	.5004	.2017	.8031	.16788	.44540	19
42	.55484	.83195	.66692	.4994	.2020	.8023	.16804	.44515	18
43	.55509	.83179	.66734	.4985	.2022	.8015	.16821	.44491	17
44	.55533	.83163	.66776	.4975	.2024	.8007	.16837	.44467	16
45	0.55557	0.83147	0.66818	1.4966	1.2027	1.7999	0.16853	0.44443	15
46	.55581	.83131	.66860	.4957	.2029	.7992	.16869	.44419	14
47	.55605	.83115	.66902	.4947	.2031	.7984	.16885	.44395	13
48	.55629	.83098	.66944	.4938	.2034	.7976	.16901	.44370	12
49	.55654	.83082	.66986	.4928	.2036	.7968	.16918	.44346	11
50	0.55678	0.83066	0.67028	1.4919	1.2039	1.7960	0.16934	0.44322	10
51	.55702	.83050	.67071	.4910	.2041	.7953	.16950	.44298	9
52	.55726	.83034	.67113	.4900	.2043	.7945	.16966	.44274	8
53	.55750	.83017	.67155	.4891	.2046	.7937	.16982	.44250	7
54	.55774	.83001	.67197	.4881	.2048	.7929	.16999	.44225	6
55	0.55799	0.82985	0.67239	1.4872	1.2050	1.7921	0.17015	0.44201	5
56	.55823	.82969	.67282	.4863	.2053	.7914	.17031	.44177	4
57	.55847	.82952	.67324	.4853	.2055	.7906	.17047	.44153	3
58	.55871	.82936	.67366	.4844	.2057	.7898	.17064	.44129	2
59	.55895	.82920	.67408	.4835	.2060	.7891	.17080	.44105	1
60	0.55919	0.82904	0.67451	1.4826	1.2062	1.7883	0.17096	0.44081	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.55919	0.82904	0.67451	1.4826	1.2062	1.7883	0.17096	0.44081	60
1	.55943	.82887	.67493	.4816	.2064	.7875	.17112	.44057	59
2	.55967	.82871	.67535	.4807	.2067	.7867	.17129	.44032	58
3	.55992	.82855	.67578	.4798	.2069	.7860	.17145	.44008	57
4	.56016	.82839	.67620	.4788	.2072	.7852	.17161	.43984	56
5	0.56040	0.82822	0.67663	1.4779	1.2074	1.7844	0.17178	0.43960	55
6	.56064	.82806	.67705	.4770	.2076	.7837	.17194	.43936	54
7	.56088	.82790	.67747	.4761	.2079	.7829	.17210	.43912	53
8	.56112	.82773	.67790	.4751	.2081	.7821	.17227	.43888	52
9	.56136	.82757	.67832	.4742	.2083	.7814	.17243	.43864	51
10	0.56160	0.82741	0.67875	1.4733	1.2086	1.7806	0.17259	0.43840	50
11	.56184	.82724	.67917	.4724	.2088	.7798	.17276	.43816	49
12	.56208	.82708	.67960	.4714	.2091	.7791	.17292	.43792	48
13	.56232	.82692	.68002	.4705	.2093	.7783	.17308	.43768	47
14	.56256	.82675	.68045	.4696	.2095	.7776	.17325	.43743	46
15	0.56280	0.82659	0.68087	1.4687	1.2098	1.7768	0.17341	0.43719	45
16	.56304	.82643	.68130	.4678	.2100	.7760	.17357	.43695	44
17	.56328	.82626	.68173	.4669	.2103	.7753	.17374	.43671	43
18	.56353	.82610	.68215	.4659	.2105	.7745	.17390	.43647	42
19	.56377	.82593	.68258	.4650	.2107	.7738	.17406	.43623	41
20	0.56401	0.82577	0.68301	1.4641	1.2110	1.7730	0.17423	0.43599	40
21	.56425	.82561	.68343	.4632	.2112	.7723	.17439	.43575	39
22	.56449	.82544	.68386	.4623	.2115	.7715	.17456	.43551	38
23	.56473	.82528	.68429	.4614	.2117	.7708	.17472	.43527	37
24	.56497	.82511	.68471	.4605	.2119	.7700	.17489	.43503	36
25	0.56521	0.82495	0.68514	1.4595	1.2122	1.7693	0.17505	0.43479	35
26	.56545	.82478	.68557	.4586	.2124	.7685	.17521	.43455	34
27	.56569	.82462	.68600	.4577	.2127	.7678	.17538	.43431	33
28	.56593	.82445	.68642	.4568	.2129	.7670	.17554	.43407	32
29	.56617	.82429	.68685	.4559	.2132	.7663	.17571	.43383	31
30	0.56641	0.82413	0.68728	1.4550	1.2134	1.7655	0.17587	0.43359	30
31	.56664	.82396	.68771	.4541	.2136	.7648	.17604	.43335	29
32	.56688	.82380	.68814	.4532	.2139	.7640	.17620	.43311	28
33	.56712	.82363	.68857	.4523	.2141	.7633	.17637	.43287	27
34	.56736	.82347	.68899	.4514	.2144	.7625	.17653	.43263	26
35	0.56760	0.82330	0.68942	1.4505	1.2146	1.7618	0.17670	0.43239	25
36	.56784	.82314	.68985	.4496	.2149	.7610	.17686	.43216	24
37	.56808	.82297	.69028	.4487	.2151	.7603	.17703	.43192	23
38	.56832	.82280	.69071	.4478	.2153	.7596	.17719	.43168	22
39	.56856	.82264	.69114	.4469	.2156	.7588	.17736	.43144	21
40	0.56880	0.82247	0.69157	1.4460	1.2158	1.7581	0.17752	0.43120	20
41	.56904	.82231	.69200	.4451	.2161	.7573	.17769	.43096	19
42	.56928	.82214	.69243	.4442	.2163	.7566	.17786	.43072	18
43	.56952	.82198	.69286	.4433	.2166	.7559	.17802	.43048	17
44	.56976	.82181	.69329	.4424	.2168	.7551	.17819	.43024	16
45	0.57000	0.82165	0.69372	1.4415	1.2171	1.7544	0.17835	0.43000	15
46	.57023	.82148	.69415	.4406	.2173	.7537	.17852	.42976	14
47	.57047	.82131	.69459	.4397	.2175	.7529	.17868	.42952	13
48	.57071	.82115	.69502	.4388	.2178	.7522	.17885	.42929	12
49	.57095	.82098	.69545	.4379	.2180	.7514	.17902	.42905	11
50	0.57119	0.82082	0.69588	1.4370	1.2183	1.7507	0.17918	0.42881	10
51	.57143	.82065	.69631	.4361	.2185	.7500	.17935	.42857	9
52	.57167	.82048	.69674	.4352	.2188	.7493	.17951	.42833	8
53	.57191	.82032	.69718	.4343	.2190	.7485	.17968	.42809	7
54	.57214	.82015	.69761	.4335	.2193	.7478	.17985	.42785	6
55	0.57238	0.81998	0.69804	1.4326	1.2195	1.7471	0.18001	0.42761	5
56	.57262	.81982	.69847	.4317	.2198	.7463	.18018	.42738	4
57	.57286	.81965	.69891	.4308	.2200	.7456	.18035	.42714	3
58	.57310	.81948	.69934	.4299	.2203	.7449	.18051	.42690	2
59	.57334	.81932	.69977	.4290	.2205	.7442	.18068	.42666	1
60	0.57358	0.81915	0.70021	1.4281	1.2208	1.7434	0.18085	0.42642	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.57358	0.81915	0.70021	1.4281	1.2208	1.7434	0.18085	0.42642	60
1	.57381	.81898	.70064	.4273	.2210	.7427	.18101	.42618	59
2	.57405	.81882	.70107	.4264	.2213	.7420	.18118	.42595	58
3	.57429	.81865	.70151	.4255	.2215	.7413	.18135	.42571	57
4	.57453	.81848	.70194	.4246	.2218	.7405	.18151	.42547	56
5	0.57477	0.81832	0.70238	1.4237	1.2220	1.7398	0.18168	0.42523	55
6	.57500	.81815	.70281	.4228	.2223	.7391	.18185	.42499	54
7	.57524	.81798	.70325	.4220	.2225	.7384	.18202	.42476	53
8	.57548	.81781	.70368	.4211	.2228	.7377	.18218	.42452	52
9	.57572	.81765	.70412	.4202	.2230	.7369	.18235	.42428	51
10	0.57596	0.81748	0.70455	1.4193	1.2233	1.7362	0.18252	0.42404	50
11	.57619	.81731	.70499	.4185	.2235	.7355	.18269	.42380	49
12	.57643	.81714	.70542	.4176	.2238	.7348	.18285	.42357	48
13	.57667	.81698	.70586	.4167	.2240	.7341	.18302	.42333	47
14	.57691	.81681	.70629	.4158	.2243	.7334	.18319	.42309	46
15	0.57714	0.81664	0.70673	1.4150	1.2245	1.7327	0.18336	0.42285	45
16	.57738	.81647	.70717	.4141	.2248	.7319	.18353	.42262	44
17	.57762	.81630	.70760	.4132	.2250	.7312	.18369	.42238	43
18	.57786	.81614	.70804	.4123	.2253	.7305	.18386	.42214	42
19	.57809	.81597	.70848	.4115	.2255	.7298	.18403	.42190	41
20	0.57833	0.81580	0.70891	1.4106	1.2258	1.7291	0.18420	0.42167	40
21	.57857	.81563	.70935	.4097	.2260	.7284	.18437	.42143	39
22	.57881	.81546	.70979	.4089	.2263	.7277	.18453	.42119	38
23	.57904	.81530	.71022	.4080	.2265	.7270	.18470	.42096	37
24	.57928	.81513	.71066	.4071	.2268	.7263	.18487	.42072	36
25	0.57952	0.81496	0.71110	1.4063	1.2270	1.7256	0.18504	0.42048	35
26	.57975	.81479	.71154	.4054	.2273	.7249	.18521	.42024	34
27	.57999	.81462	.71198	.4045	.2276	.7242	.18538	.42001	33
28	.58023	.81445	.71241	.4037	.2278	.7234	.18555	.41977	32
29	.58047	.81428	.71285	.4028	.2281	.7227	.18571	.41953	31
30	0.58070	0.81411	0.71329	1.4019	1.2283	1.7220	0.18588	0.41930	30
31	.58094	.81395	.71373	.4011	.2286	.7213	.18605	.41906	29
32	.58118	.81378	.71417	.4002	.2288	.7206	.18622	.41882	28
33	.58141	.81361	.71461	.3994	.2291	.7199	.18639	.41859	27
34	.58165	.81344	.71505	.3985	.2293	.7192	.18656	.41835	26
35	0.58189	0.81327	0.71549	1.3976	1.2296	1.7185	0.18673	0.41811	25
36	.58212	.81310	.71593	.3968	.2298	.7178	.18690	.41788	24
37	.58236	.81293	.71637	.3959	.2301	.7171	.18707	.41764	23
38	.58259	.81276	.71681	.3951	.2304	.7164	.18724	.41740	22
39	.58283	.81259	.71725	.3942	.2306	.7157	.18741	.41717	21
40	0.58307	0.81242	0.71769	1.3933	1.2309	1.7151	0.18758	0.41693	20
41	.58330	.81225	.71813	.3925	.2311	.7144	.18775	.41669	19
42	.58354	.81208	.71857	.3916	.2314	.7137	.18792	.41646	18
43	.58378	.81191	.71901	.3908	.2316	.7130	.18809	.41622	17
44	.58401	.81174	.71945	.3899	.2319	.7123	.18826	.41599	16
45	0.58425	0.81157	0.71990	1.3891	1.2322	1.7116	0.18843	0.41575	15
46	.58448	.81140	.72034	.3882	.2324	.7109	.18860	.41551	14
47	.58472	.81123	.72078	.3874	.2327	.7102	.18877	.41528	13
48	.58496	.81106	.72122	.3865	.2329	.7095	.18894	.41504	12
49	.58519	.81089	.72166	.3857	.2332	.7088	.18911	.41481	11
50	0.58543	0.81072	0.72211	1.3848	1.2335	1.7081	0.18928	0.41457	10
51	.58566	.81055	.72255	.3840	.2337	.7075	.18945	.41433	9
52	.58590	.81038	.72299	.3831	.2340	.7068	.18962	.41410	8
53	.58614	.81021	.72344	.3823	.2342	.7061	.18979	.41386	7
54	.58637	.81004	.72388	.3814	.2345	.7054	.18996	.41363	6
55	0.58661	0.80987	0.72432	1.3806	1.2348	1.7047	0.19013	0.41339	5
56	.58684	.80970	.72477	.3797	.2350	.7040	.19030	.41316	4
57	.58708	.80953	.72521	.3789	.2353	.7033	.19047	.41292	3
58	.58731	.80936	.72565	.3781	.2355	.7027	.19064	.41268	2
59	.58755	.80919	.72610	.3772	.2358	.7020	.19081	.41245	1
60	0.58778	0.80902	0.72654	1.3764	1.2361	1.7013	0.19098	0.41221	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos	M
0	0.53773	0.80902	0.72654	1.3764	1.2361	1.7013	0.19096	0.41221	60
1	.53802	.80885	.72699	.3755	.2363	.7006	.19115	.41198	59
2	.53825	.80867	.72743	.3747	.2366	.6999	.19132	.41174	58
3	.53849	.80850	.72788	.3738	.2368	.6993	.19150	.41151	57
4	.53873	.80833	.72832	.3730	.2371	.6986	.19167	.41127	56
5	0.53896	0.80816	0.72877	1.3722	1.2374	1.6979	0.19184	0.41104	55
6	.53920	.80799	.72921	.3713	.2376	.6972	.19201	.41080	54
7	.53943	.80782	.72966	.3705	.2379	.6965	.19218	.41057	53
8	.53967	.80765	.73010	.3697	.2382	.6959	.19235	.41033	52
9	.53990	.80747	.73055	.3688	.2384	.6952	.19252	.41010	51
10	0.59011	0.80730	0.73100	1.3680	1.2387	1.6945	0.19270	0.40986	50
11	.59037	.80713	.73144	.3672	.2389	.6938	.19287	.40963	49
12	.59060	.80695	.73189	.3663	.2392	.6932	.19304	.40939	48
13	.59084	.80677	.73234	.3655	.2395	.6925	.19321	.40916	47
14	.59107	.80662	.73278	.3647	.2397	.6918	.19338	.40892	46
15	0.59131	0.80644	0.73323	1.3638	1.2400	1.6912	0.19355	0.40869	45
16	.59154	.80627	.73368	.3630	.2403	.6905	.19373	.40845	44
17	.59178	.80610	.73412	.3622	.2405	.6898	.19390	.40822	43
18	.59201	.80593	.73457	.3613	.2408	.6891	.19407	.40799	42
19	.59225	.80576	.73502	.3605	.2411	.6885	.19424	.40775	41
20	0.59248	0.80558	0.73547	1.3597	1.2413	1.6878	0.19442	0.40752	40
21	.59272	.80541	.73592	.3588	.2416	.6871	.19459	.40728	39
22	.59295	.80524	.73637	.3580	.2419	.6865	.19476	.40705	38
23	.59318	.80507	.73681	.3572	.2421	.6858	.19493	.40681	37
24	.59342	.80489	.73726	.3564	.2424	.6851	.19511	.40658	36
25	0.59365	0.80472	0.73771	1.3555	1.2427	1.6845	0.19528	0.40635	35
26	.59389	.80455	.73816	.3547	.2429	.6838	.19545	.40611	34
27	.59412	.80437	.73861	.3539	.2432	.6831	.19562	.40588	33
28	.59435	.80420	.73906	.3531	.2435	.6825	.19580	.40564	32
29	.59459	.80403	.73951	.3522	.2437	.6818	.19597	.40541	31
30	0.59482	0.80386	0.73996	1.3514	1.2440	1.6812	0.19614	0.40518	30
31	.59506	.80368	.74041	.3506	.2443	.6805	.19632	.40494	29
32	.59529	.80351	.74086	.3498	.2445	.6798	.19649	.40471	28
33	.59552	.80334	.74131	.3489	.2448	.6792	.19666	.40447	27
34	.59576	.80316	.74176	.3481	.2451	.6785	.19683	.40424	26
35	0.59599	0.80299	0.74221	1.3473	1.2453	1.6779	0.19701	0.40401	25
36	.59622	.80282	.74266	.3465	.2456	.6772	.19718	.40377	24
37	.59646	.80264	.74312	.3457	.2459	.6766	.19736	.40354	23
38	.59669	.80247	.74357	.3449	.2461	.6759	.19753	.40331	22
39	.59692	.80230	.74402	.3440	.2464	.6752	.19770	.40307	21
40	0.59716	0.80212	0.74447	1.3432	1.2467	1.6746	0.19788	0.40284	20
41	.59739	.80195	.74492	.3424	.2470	.6739	.19805	.40261	19
42	.59762	.80177	.74538	.3416	.2472	.6733	.19822	.40237	18
43	.59786	.80160	.74583	.3408	.2475	.6726	.19840	.40214	17
44	.59809	.80143	.74628	.3400	.2478	.6720	.19857	.40191	16
45	0.59832	0.80125	0.74673	1.3392	1.2480	1.6713	0.19875	0.40167	15
46	.59856	.80108	.74719	.3383	.2483	.6707	.19892	.40144	14
47	.59879	.80090	.74764	.3375	.2486	.6700	.19909	.40121	13
48	.59902	.80073	.74809	.3367	.2488	.6694	.19927	.40098	12
49	.59926	.80056	.74855	.3359	.2491	.6687	.19945	.40074	11
50	0.59949	0.80038	0.74900	1.3351	1.2494	1.6681	0.19962	0.40051	10
51	.59972	.80021	.74946	.3343	.2497	.6674	.19979	.40028	9
52	.59995	.80003	.74991	.3335	.2499	.6668	.19997	.40004	8
53	.60019	.79986	.75037	.3327	.2502	.6661	.20014	.39981	7
54	.60042	.79968	.75082	.3319	.2505	.6655	.20031	.39958	6
55	0.60065	0.79951	0.75128	1.3311	1.2508	1.6648	0.20049	0.39935	5
56	.60088	.79933	.75173	.3303	.2510	.6642	.20066	.39911	4
57	.60112	.79916	.75219	.3294	.2513	.6636	.20084	.39888	3
58	.60135	.79898	.75264	.3286	.2516	.6629	.20101	.39865	2
59	.60158	.79881	.75310	.3278	.2519	.6623	.20119	.39842	1
60	0.60181	0.79863	0.75355	1.3270	1.2521	1.6616	0.20136	0.39818	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.60181	0.79863	0.75355	1.3270	1.2521	1.6616	0.20136	0.39818	60
1	.60205	.79846	.75401	.3262	.2524	.6610	.20154	.39795	59
2	.60228	.79828	.75447	.3254	.2527	.6603	.20171	.39772	58
3	.60251	.79811	.75492	.3246	.2530	.6597	.20189	.39749	57
4	.60274	.79793	.75538	.3238	.2532	.6591	.20206	.39726	56
5	0.60298	0.79776	0.75584	1.3230	1.2535	1.6584	0.20224	0.39702	55
6	.60320	.79758	.75629	.3222	.2538	.6578	.20242	.39679	54
7	.60344	.79741	.75675	.3214	.2541	.6572	.20259	.39656	53
8	.60367	.79723	.75721	.3206	.2543	.6565	.20277	.39633	52
9	.60390	.79706	.75767	.3198	.2546	.6559	.20294	.39610	51
10	0.60413	0.79688	0.75812	1.3190	1.2549	1.6552	0.20312	0.39586	50
11	.60437	.79670	.75858	.3182	.2552	.6546	.20329	.39563	49
12	.60460	.79653	.75904	.3174	.2554	.6540	.20347	.39540	48
13	.60483	.79635	.75950	.3166	.2557	.6533	.20365	.39517	47
14	.60506	.79618	.75996	.3159	.2560	.6527	.20382	.39494	46
15	0.60529	0.79600	0.76042	1.3151	1.2563	1.6521	0.20400	0.39471	45
16	.60552	.79582	.76088	.3143	.2565	.6514	.20417	.39447	44
17	.60576	.79565	.76134	.3135	.2568	.6508	.20435	.39424	43
18	.60599	.79547	.76179	.3127	.2571	.6502	.20453	.39401	42
19	.60622	.79530	.76225	.3119	.2574	.6496	.20470	.39378	41
20	0.60645	0.79512	0.76271	1.3111	1.2577	1.6489	0.20488	0.39355	40
21	.60668	.79494	.76317	.3103	.2579	.6483	.20505	.39332	39
22	.60691	.79477	.76363	.3095	.2582	.6477	.20523	.39309	38
23	.60714	.79459	.76410	.3087	.2585	.6470	.20541	.39285	37
24	.60737	.79441	.76456	.3079	.2588	.6464	.20558	.39262	36
25	0.60761	0.79424	0.76502	1.3071	1.2591	1.6458	0.20576	0.39239	35
26	.60784	.79406	.76548	.3064	.2593	.6452	.20594	.39216	34
27	.60807	.79388	.76594	.3056	.2596	.6445	.20611	.39193	33
28	.60830	.79371	.76640	.3048	.2599	.6439	.20629	.39170	32
29	.60853	.79353	.76686	.3040	.2602	.6433	.20647	.39147	31
30	0.60876	0.79335	0.76733	1.3032	1.2605	1.6127	0.20665	0.39124	30
31	.60899	.79318	.76779	.3024	.2607	.6420	.20682	.39101	29
32	.60922	.79300	.76825	.3016	.2610	.6414	.20700	.39078	28
33	.60945	.79282	.76871	.3009	.2613	.6408	.20718	.39055	27
34	.60968	.79264	.76918	.3001	.2616	.6402	.20735	.39033	26
35	0.60991	0.79247	0.76964	1.2993	1.2619	1.6396	0.20753	0.39008	25
36	.61014	.79229	.77010	.2985	.2622	.6389	.20771	.38985	24
37	.61037	.79211	.77057	.2977	.2624	.6383	.20789	.38962	23
38	.61061	.79193	.77103	.2970	.2627	.6377	.20806	.38939	22
39	.61084	.79176	.77149	.2962	.2630	.6371	.20824	.38916	21
40	0.61107	0.79158	0.77196	1.2954	1.2633	1.6365	0.20842	0.38893	20
41	.61130	.79140	.77242	.2946	.2636	.6359	.20860	.38870	19
42	.61153	.79122	.77289	.2938	.2639	.6352	.20878	.38847	18
43	.61176	.79104	.77335	.2931	.2641	.6346	.20895	.38824	17
44	.61199	.79087	.77382	.2923	.2644	.6340	.20913	.38801	16
45	0.61222	0.79069	0.77428	1.2915	1.2647	1.6334	0.20931	0.38778	15
46	.61245	.79051	.77475	.2907	.2650	.6328	.20949	.38755	14
47	.61268	.79033	.77521	.2900	.2653	.6322	.20967	.38732	13
48	.61290	.79015	.77568	.2892	.2656	.6316	.20984	.38709	12
49	.61314	.78998	.77614	.2884	.2659	.6309	.21002	.38686	11
50	0.61337	0.78980	0.77661	1.2876	1.2661	1.6303	0.21020	0.38663	10
51	.61360	.78962	.77708	.2869	.2664	.6297	.21038	.38640	9
52	.61383	.78944	.77754	.2861	.2667	.6291	.21056	.38617	8
53	.61405	.78926	.77801	.2853	.2670	.6285	.21074	.38594	7
54	.61428	.78908	.77848	.2845	.2673	.6279	.21091	.38571	6
55	0.61451	0.78890	0.77895	1.2838	1.2676	1.6273	0.21109	0.38548	5
56	.61474	.78873	.77941	.2830	.2679	.6267	.21127	.38525	4
57	.61497	.78855	.77988	.2822	.2681	.6261	.21145	.38503	3
58	.61520	.78837	.78035	.2815	.2684	.6255	.21163	.38480	2
59	.61543	.78819	.78082	.2807	.2687	.6249	.21181	.38457	1
60	0.61566	0.78801	0.78128	1.2799	1.2690	1.6243	0.21199	0.38434	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



35°

Natural Trigonometric Functions

141°

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.61566	0.78801	0.78128	1.2799	1.2690	1.6243	0.21199	0.38434	60
1	61589	.78783	.78175	.2792	.2693	.6237	.21217	.38411	59
2	61612	.78765	.78222	.2784	.2696	.6231	.21235	.38388	58
3	61635	.78747	.78269	.2776	.2699	.6224	.21253	.38365	57
4	61658	.78729	.78316	.2769	.2702	.6218	.21271	.38342	56
5	0.61681	0.78711	0.78363	1.2761	1.2705	1.6212	0.21288	0.38319	55
6	.61703	.78693	.78410	.2753	.2707	.6206	.21306	.38296	54
7	.61726	.78675	.78457	.2746	.2710	.6200	.21324	.38273	53
8	.61749	.78657	.78504	.2738	.2713	.6194	.21342	.38251	52
9	.61772	.78640	.78551	.2730	.2716	.6188	.21360	.38228	51
10	0.61795	0.78622	0.78598	1.2723	1.2719	1.6182	0.21378	0.38205	50
11	.61818	.78604	.78645	.2715	.2722	.6176	.21396	.38182	49
12	.61841	.78586	.78692	.2708	.2725	.6170	.21414	.38159	48
13	.61864	.78568	.78739	.2700	.2728	.6164	.21432	.38136	47
14	.61886	.78550	.78786	.2692	.2731	.6159	.21450	.38113	46
15	0.61909	0.78532	0.78834	1.2685	1.2734	1.6153	0.21468	0.38091	45
16	.61932	.78514	.78881	.2677	.2737	.6147	.21486	.38068	44
17	.61955	.78496	.78928	.2670	.2739	.6141	.21504	.38045	43
18	.61978	.78478	.78975	.2662	.2742	.6135	.21522	.38022	42
19	.62001	.78460	.79022	.2655	.2745	.6129	.21540	.37999	41
20	0.62023	0.78441	0.79070	1.2647	1.2748	1.6123	0.21558	0.37976	40
21	.62046	.78423	.79117	.2639	.2751	.6117	.21576	.37954	39
22	.62069	.78405	.79164	.2632	.2754	.6111	.21594	.37931	38
23	.62092	.78387	.79212	.2624	.2757	.6105	.21612	.37908	37
24	.62115	.78369	.79259	.2617	.2760	.6099	.21631	.37885	36
25	0.62137	0.78351	0.79306	1.2609	1.2763	1.6093	0.21649	0.37862	35
26	.62160	.78333	.79354	.2602	.2766	.6087	.21667	.37840	34
27	.62183	.78315	.79401	.2594	.2769	.6081	.21685	.37817	33
28	.62206	.78297	.79449	.2587	.2772	.6077	.21703	.37794	32
29	.62229	.78279	.79496	.2579	.2775	.6070	.21721	.37771	31
30	0.62251	0.78261	0.79543	1.2572	1.2778	1.6064	0.21739	0.37748	30
31	.62274	.78243	.79591	.2564	.2781	.6058	.21757	.37726	29
32	.62297	.78224	.79639	.2557	.2784	.6052	.21775	.37703	28
33	.62320	.78206	.79686	.2549	.2787	.6046	.21793	.37680	27
34	.62342	.78188	.79734	.2542	.2790	.6040	.21812	.37657	26
35	0.62365	0.78170	0.79781	1.2534	1.2793	1.6034	0.21830	0.37635	25
36	.62388	.78152	.79829	.2527	.2795	.6029	.21848	.37612	24
37	.62411	.78134	.79876	.2519	.2798	.6023	.21866	.37589	23
38	.62433	.78116	.79924	.2512	.2801	.6017	.21884	.37566	22
39	.62456	.78097	.79972	.2504	.2804	.6011	.21902	.37544	21
40	0.62479	0.78079	0.80020	1.2497	1.2807	1.6005	0.21921	0.37521	20
41	.62501	.78061	.80067	.2489	.2810	.6000	.21939	.37498	19
42	.62524	.78043	.80115	.2482	.2813	.5994	.21957	.37476	18
43	.62547	.78025	.80163	.2475	.2816	.5988	.21975	.37453	17
44	.62570	.78007	.80211	.2467	.2819	.5982	.21993	.37430	16
45	0.62592	0.77988	0.80258	1.2460	1.2822	1.5976	0.22011	0.37408	15
46	.62615	.77970	.80306	.2452	.2825	.5971	.22030	.37385	14
47	.62638	.77952	.80354	.2445	.2828	.5965	.22048	.37362	13
48	.62660	.77934	.80402	.2437	.2831	.5959	.22066	.37340	12
49	.62683	.77915	.80450	.2430	.2834	.5953	.22084	.37317	11
50	0.62706	0.77897	0.80498	1.2423	1.2837	1.5947	0.22103	0.37294	10
51	.62728	.77879	.80546	.2415	.2840	.5942	.22121	.37272	9
52	.62751	.77861	.80594	.2408	.2843	.5936	.22139	.37249	8
53	.62774	.77842	.80642	.2400	.2846	.5930	.22157	.37226	7
54	.62796	.77824	.80690	.2393	.2849	.5924	.22176	.37204	6
55	0.62819	0.77806	0.80738	1.2386	1.2852	1.5919	0.22194	0.37181	5
56	.62841	.77788	.80786	.2378	.2855	.5913	.22212	.37158	4
57	.62864	.77769	.80834	.2371	.2858	.5907	.22230	.37136	3
58	.62887	.77751	.80882	.2364	.2861	.5901	.22249	.37113	2
59	.62909	.77733	.80930	.2356	.2864	.5896	.22267	.37090	1
60	0.62932	0.77715	0.80978	1.2349	1.2867	1.5890	0.22285	0.37068	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

128°

51°



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.62932	0.77715	0.80978	1.2449	1.2867	1.5890	0.22285	0.37068	60
1	0.62935	.77696	.81026	1.2442	.2871	.5884	.22304	.37045	59
2	.62977	.77678	.81075	1.2434	.2874	.5879	.22322	.37023	58
3	.63000	.77660	.81123	1.2427	.2877	.5873	.22340	.37000	57
4	.63022	.77641	.81171	1.2420	.2880	.5867	.22359	.36977	56
5	0.63045	0.77623	0.81219	1.2412	1.2883	1.5862	0.22377	0.36955	55
6	.63067	.77605	.81268	1.2405	.2886	.5856	.22395	.36932	54
7	.63099	.77586	.81316	1.2397	.2889	.5850	.22414	.36910	53
8	.63113	.77568	.81364	1.2390	.2892	.5845	.22432	.36887	52
9	.63135	.77549	.81413	1.2383	.2895	.5839	.22450	.36865	51
10	0.63158	0.77531	0.81461	1.2376	1.2898	1.5833	0.22469	0.36842	50
11	.63180	.77513	.81509	1.2368	.2901	.5828	.22487	.36820	49
12	.63203	.77494	.81558	1.2361	.2904	.5822	.22505	.36797	48
13	.63225	.77476	.81606	1.2354	.2907	.5816	.22524	.36774	47
14	.63248	.77458	.81655	1.2347	.2910	.5811	.22542	.36752	46
15	0.63270	0.77439	0.81703	1.2339	1.2913	1.5805	0.22561	0.36729	45
16	.63293	.77421	.81752	1.2332	.2916	.5799	.22579	.36707	44
17	.63315	.77402	.81800	1.2325	.2919	.5794	.22597	.36684	43
18	.63338	.77384	.81849	1.2318	.2922	.5788	.22616	.36662	42
19	.63360	.77365	.81898	1.2310	.2926	.5783	.22634	.36639	41
20	0.63383	0.77347	0.81946	1.2303	1.2929	1.5777	0.22653	0.36617	40
21	.63405	.77329	.81995	1.2296	.2932	.5771	.22671	.36594	39
22	.63428	.77310	.82043	1.2289	.2935	.5766	.22690	.36572	38
23	.63450	.77292	.82092	1.2281	.2938	.5760	.22708	.36549	37
24	.63473	.77273	.82141	1.2274	.2941	.5755	.22727	.36527	36
25	0.63495	0.77255	0.82190	1.2267	1.2944	1.5749	0.22745	0.36504	35
26	.63518	.77236	.82238	1.2260	.2947	.5743	.22763	.36482	34
27	.63540	.77218	.82287	1.2252	.2950	.5738	.22782	.36459	33
28	.63563	.77199	.82336	1.2245	.2953	.5732	.22800	.36437	32
29	.63585	.77181	.82385	1.2238	.2956	.5727	.22819	.36415	31
30	0.63608	0.77162	0.82434	1.2231	1.2960	1.5721	0.22837	0.36392	30
31	.63630	.77144	.82482	1.2224	.2963	.5716	.22856	.36370	29
32	.63653	.77125	.82531	1.2217	.2966	.5710	.22874	.36347	28
33	.63675	.77107	.82580	1.2210	.2969	.5705	.22893	.36325	27
34	.63697	.77088	.82629	1.2202	.2972	.5699	.22912	.36302	26
35	0.63720	0.77070	0.82678	1.2195	1.2975	1.5694	0.22930	0.36280	25
36	.63742	.77051	.82727	1.2188	.2978	.5688	.22949	.36258	24
37	.63765	.77033	.82776	1.2181	.2981	.5683	.22967	.36235	23
38	.63787	.77014	.82825	1.2174	.2985	.5677	.22986	.36213	22
39	.63810	.76996	.82874	1.2166	.2988	.5672	.23004	.36190	21
40	0.63832	0.76977	0.82923	1.2159	1.2991	1.5666	0.23023	0.36168	20
41	.63854	.76958	.82972	1.2152	.2994	.5661	.23041	.36146	19
42	.63877	.76940	.83022	1.2145	.2997	.5655	.23060	.36123	18
43	.63899	.76921	.83071	1.2138	.3000	.5650	.23079	.36101	17
44	.63921	.76903	.83120	1.2131	.3003	.5644	.23097	.36078	16
45	0.63944	0.76884	0.83169	1.2124	1.3006	1.5639	0.23116	0.36056	15
46	.63966	.76865	.83218	1.2116	.3010	.5633	.23134	.36034	14
47	.63989	.76847	.83267	1.2109	.3013	.5628	.23153	.36011	13
48	.64011	.76828	.83317	1.2102	.3016	.5622	.23172	.35989	12
49	.64033	.76810	.83366	1.2095	.3019	.5617	.23190	.35967	11
50	0.64056	0.76791	0.83415	1.2088	1.3022	1.5611	0.23209	0.35944	10
51	.64078	.76772	.83465	1.2081	.3025	.5606	.23227	.35922	9
52	.64100	.76754	.83514	1.2074	.3029	.5600	.23246	.35900	8
53	.64123	.76735	.83563	1.2067	.3032	.5595	.23265	.35877	7
54	.64145	.76716	.83613	1.2060	.3035	.5590	.23283	.35855	6
55	0.64167	0.76698	0.83662	1.2053	1.3038	1.5584	0.23302	0.35833	5
56	.64189	.76679	.83712	1.2046	.3041	.5579	.23321	.35810	4
57	.64212	.76660	.83761	1.2039	.3044	.5573	.23339	.35788	3
58	.64234	.76642	.83811	1.2032	.3048	.5568	.23358	.35766	2
59	.64256	.76623	.83860	1.2024	.3051	.5563	.23377	.35743	1
60	0.64279	0.76604	0.83910	1.2017	1.3054	1.5557	0.23395	0.35721	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.61279	0.76604	0.83910	1.1917	1.3054	1.5557	0.23395	0.35721	60
1	.64301	.76586	.83959	.1910	.3057	.5552	.23414	.35699	59
2	.64323	.76567	.84009	.1903	.3060	.5546	.23433	.35677	58
3	.64345	.76548	.84059	.1896	.3064	.5541	.23452	.35654	57
4	.64368	.76530	.84108	.1889	.3067	.5536	.23470	.35632	56
5	0.64390	0.76511	0.84158	1.1882	1.3070	1.5530	0.23489	0.35610	55
6	.64412	.76492	.84208	.1875	.3073	.5525	.23508	.35588	54
7	.64435	.76473	.84257	.1868	.3076	.5520	.23527	.35565	53
8	.64457	.76455	.84307	.1861	.3080	.5514	.23545	.35543	52
9	.64479	.76436	.84357	.1854	.3083	.5509	.23564	.35521	51
10	0.64501	0.76417	0.84407	1.1847	1.3086	1.5503	0.23583	0.35499	50
11	.64523	.76398	.84457	.1840	.3089	.5498	.23602	.35476	49
12	.64546	.76380	.84506	.1833	.3092	.5493	.23620	.35454	48
13	.64568	.76361	.84556	.1826	.3096	.5487	.23639	.35432	47
14	.64590	.76342	.84606	.1819	.3099	.5482	.23658	.35410	46
15	0.64612	0.76323	0.84656	1.1812	1.3102	1.5477	0.23677	0.35388	45
16	.64635	.76304	.84706	.1805	.3105	.5471	.23695	.35365	44
17	.64657	.76286	.84756	.1798	.3109	.5466	.23714	.35343	43
18	.64679	.76267	.84806	.1791	.3112	.5461	.23733	.35321	42
19	.64701	.76248	.84856	.1785	.3115	.5456	.23752	.35299	41
20	0.64723	0.76229	0.84906	1.1778	1.3118	1.5450	0.23771	0.35277	40
21	.64745	.76210	.84956	.1771	.3121	.5445	.23790	.35254	39
22	.64768	.76191	.85006	.1764	.3125	.5440	.23808	.35232	38
23	.64790	.76173	.85056	.1757	.3128	.5434	.23827	.35210	37
24	.64812	.76154	.85107	.1750	.3131	.5429	.23846	.35188	36
25	0.64834	0.76135	0.85157	1.1743	1.3134	1.5424	0.23865	0.35166	35
26	.64856	.76116	.85207	.1736	.3138	.5419	.23884	.35144	34
27	.64878	.76097	.85257	.1729	.3141	.5413	.23903	.35121	33
28	.64900	.76078	.85307	.1722	.3144	.5408	.23922	.35099	32
29	.64923	.76059	.85358	.1715	.3148	.5403	.23940	.35077	31
30	0.64945	0.76041	0.85408	1.1708	1.3151	1.5398	0.23959	0.35055	30
31	.64967	.76022	.85458	.1702	.3154	.5392	.23978	.35033	29
32	.64989	.76003	.85509	.1695	.3157	.5387	.23997	.35011	28
33	.65011	.75984	.85559	.1688	.3161	.5382	.24016	.34989	27
34	.65033	.75965	.85609	.1681	.3164	.5377	.24035	.34967	26
35	0.65055	0.75946	0.85660	1.1674	1.3167	1.5371	0.24054	0.34945	25
36	.65077	.75927	.85710	.1667	.3170	.5366	.24073	.34923	24
37	.65100	.75908	.85761	.1660	.3174	.5361	.24092	.34900	23
38	.65121	.75889	.85811	.1653	.3177	.5356	.24111	.34878	22
39	.65144	.75870	.85862	.1647	.3180	.5351	.24130	.34856	21
40	0.65166	0.75851	0.85912	1.1640	1.3184	1.5345	0.24149	0.34834	20
41	.65188	.75832	.85963	.1633	.3187	.5340	.24168	.34812	19
42	.65210	.75813	.86013	.1626	.3190	.5335	.24186	.34790	18
43	.65232	.75794	.86064	.1619	.3193	.5330	.24205	.34768	17
44	.65254	.75775	.86115	.1612	.3197	.5325	.24224	.34746	16
45	0.65276	0.75756	0.86165	1.1605	1.3200	1.5319	0.24243	0.34724	15
46	.65298	.75737	.86216	.1599	.3203	.5314	.24262	.34702	14
47	.65320	.75718	.86267	.1592	.3207	.5309	.24281	.34680	13
48	.65342	.75700	.86318	.1585	.3210	.5304	.24300	.34658	12
49	.65364	.75681	.86368	.1578	.3213	.5299	.24319	.34636	11
50	0.65386	0.75661	0.86419	1.1571	1.3217	1.5294	0.24338	0.34614	10
51	.65408	.75642	.86470	.1565	.3220	.5289	.24357	.34592	9
52	.65430	.75623	.86521	.1558	.3223	.5283	.24376	.34570	8
53	.65452	.75604	.86572	.1551	.3227	.5278	.24396	.34548	7
54	.65474	.75585	.86623	.1544	.3230	.5273	.24415	.34526	6
55	0.65496	0.75566	0.86674	1.1537	1.3233	1.5268	0.24434	0.34504	5
56	.65518	.75547	.86725	.1531	.3237	.5263	.24453	.34482	4
57	.65540	.75528	.86775	.1524	.3240	.5258	.24472	.34460	3
58	.65562	.75509	.86826	.1517	.3243	.5253	.24491	.34438	2
59	.65584	.75490	.86878	.1510	.3247	.5248	.24510	.34416	1
60	0.65606	0.75471	0.86929	1.1504	1.3250	1.5242	0.24529	0.34394	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.65606	0.75471	0.86929	1.1504	1.3250	1.5242	0.24529	0.34394	60
1	.65628	.75452	.86980	.1497	.3253	.5237	.24548	.34372	59
2	.65650	.75433	.87031	.1490	.3257	.5232	.24567	.34350	58
3	.65672	.75414	.87082	.1483	.3260	.5227	.24586	.34328	57
4	.65694	.75394	.87133	.1477	.3263	.5222	.24605	.34306	56
5	0.65716	0.75375	0.87184	1.1470	1.3267	1.5217	0.24624	0.34284	55
6	.65737	.75356	.87235	.1463	.3270	.5212	.24644	.34262	54
7	.65759	.75337	.87287	.1456	.3274	.5207	.24663	.34240	53
8	.65781	.75318	.87338	.1450	.3277	.5202	.24682	.34219	52
9	.65803	.75299	.87389	.1443	.3280	.5197	.24701	.34197	51
10	0.65825	0.75280	0.87441	1.1436	1.3284	1.5192	0.24720	0.34175	50
11	.65847	.75261	.87492	.1430	.3287	.5187	.24739	.34153	49
12	.65869	.75241	.87543	.1423	.3290	.5182	.24758	.34131	48
13	.65891	.75222	.87595	.1416	.3294	.5177	.24778	.34109	47
14	.65913	.75203	.87646	.1409	.3297	.5171	.24797	.34087	46
15	0.65934	0.75184	0.87698	1.1403	1.3301	1.5166	0.24816	0.34065	45
16	.65956	.75165	.87749	.1396	.3304	.5161	.24835	.34043	44
17	.65978	.75146	.87801	.1389	.3307	.5156	.24854	.34022	43
18	.66000	.75126	.87852	.1383	.3311	.5151	.24873	.34000	42
19	.66022	.75107	.87904	.1376	.3314	.5146	.24893	.33978	41
20	0.66044	0.75088	0.87955	1.1369	1.3318	1.5141	0.24912	0.33956	40
21	.66066	.75069	.88007	.1363	.3321	.5136	.24931	.33934	39
22	.66087	.75049	.88058	.1356	.3324	.5131	.24950	.33912	38
23	.66109	.75030	.88110	.1349	.3328	.5126	.24970	.33891	37
24	.66131	.75011	.88162	.1343	.3331	.5121	.24989	.33869	36
25	0.66153	0.74992	0.88213	1.1336	1.3335	1.5116	0.25008	0.33847	35
26	.66175	.74973	.88265	.1329	.3338	.5111	.25027	.33825	34
27	.66197	.74953	.88317	.1323	.3342	.5106	.25047	.33803	33
28	.66218	.74934	.88369	.1316	.3345	.5101	.25066	.33781	32
29	.66240	.74915	.88421	.1309	.3348	.5096	.25085	.33760	31
30	0.66262	0.74896	0.88472	1.1303	1.3352	1.5092	0.25104	0.33738	30
31	.66284	.74876	.88524	.1296	.3355	.5087	.25124	.33716	29
32	.66305	.74857	.88576	.1290	.3359	.5082	.25143	.33694	28
33	.66327	.74838	.88628	.1283	.3362	.5077	.25162	.33673	27
34	.66349	.74818	.88680	.1276	.3366	.5072	.25181	.33651	26
35	0.66371	0.74799	0.88732	1.1270	1.3369	1.5067	0.25201	0.33629	25
36	.66393	.74780	.88784	.1263	.3372	.5062	.25220	.33607	24
37	.66414	.74760	.88836	.1257	.3376	.5057	.25239	.33586	23
38	.66436	.74741	.88888	.1250	.3379	.5052	.25259	.33564	22
39	.66458	.74722	.88940	.1243	.3383	.5047	.25278	.33542	21
40	0.66479	0.74702	0.88992	1.1237	1.3386	1.5042	0.25297	0.33520	20
41	.66501	.74683	.89044	.1230	.3390	.5037	.25317	.33499	19
42	.66523	.74664	.89097	.1224	.3393	.5032	.25336	.33477	18
43	.66545	.74644	.89149	.1217	.3397	.5027	.25355	.33455	17
44	.66566	.74625	.89201	.1211	.3400	.5022	.25375	.33433	16
45	0.66588	0.74606	0.89253	1.1204	1.3404	1.5018	0.25394	0.33412	15
46	.66610	.74586	.89306	.1197	.3407	.5013	.25414	.33390	14
47	.66631	.74567	.89358	.1191	.3411	.5008	.25433	.33368	13
48	.66653	.74548	.89410	.1184	.3414	.5003	.25452	.33347	12
49	.66675	.74528	.89463	.1178	.3418	.4998	.25472	.33325	11
50	0.66697	0.74509	0.89515	1.1171	1.3421	1.4993	0.25491	0.33303	10
51	.66718	.74489	.89567	.1165	.3425	.4988	.25510	.33282	9
52	.66740	.74470	.89620	.1158	.3428	.4983	.25530	.33260	8
53	.66762	.74450	.89672	.1152	.3432	.4979	.25549	.33238	7
54	.66783	.74431	.89725	.1145	.3435	.4974	.25569	.33217	6
55	0.66805	0.74412	0.89777	1.1139	1.3439	1.4969	0.25588	0.33195	5
56	.66826	.74392	.89830	.1132	.3442	.4964	.25608	.33173	4
57	.66848	.74373	.89882	.1126	.3446	.4959	.25627	.33152	3
58	.66870	.74353	.89935	.1119	.3449	.4954	.25647	.33130	2
59	.66891	.74334	.89988	.1113	.3453	.4949	.25666	.33108	1
60	0.66913	0.74314	0.90040	1.1106	1.3456	1.4945	0.25685	0.33087	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.66913	0.74314	0.90040	1.1106	1.3456	1.4945	0.25685	0.33087	60
1	.66935	.74295	.90093	1.1100	.3460	.4940	.25705	.33065	59
2	.66956	.74275	.90146	.1093	.3463	.4935	.25724	.33044	58
3	.66973	.74256	.90198	.1086	.3467	.4930	.25744	.33022	57
4	.66999	.74236	.90251	.1080	.3470	.4925	.25763	.33000	56
5	0.67021	0.74217	0.90304	1.1074	1.3474	1.4921	0.25783	0.32979	55
6	.67043	.74197	.90357	.1067	.3477	.4916	.25802	.32957	54
7	.67064	.74178	.90410	.1061	.3481	.4911	.25822	.32936	53
8	.67086	.74158	.90463	.1054	.3485	.4906	.25841	.32914	52
9	.67107	.74139	.90515	.1048	.3488	.4901	.25861	.32893	51
10	0.67129	0.74119	0.90568	1.1041	1.3492	1.4897	0.25880	0.32871	50
11	.67150	.74100	.90621	.1035	.3495	.4892	.25900	.32849	49
12	.67172	.74080	.90674	.1028	.3499	.4887	.25919	.32828	48
13	.67194	.74061	.90727	.1022	.3502	.4882	.25939	.32806	47
14	.67215	.74041	.90780	.1015	.3506	.4877	.25959	.32785	46
15	0.67237	0.74022	0.90834	1.1009	1.3509	1.4873	0.25978	0.32763	45
16	.67258	.74002	.90887	.1003	.3513	.4868	.25998	.32742	44
17	.67280	.73983	.90940	.0996	.3517	.4863	.26017	.32720	43
18	.67301	.73963	.90993	.0990	.3520	.4858	.26037	.32699	42
19	.67323	.73943	.91046	.0983	.3524	.4854	.26056	.32677	41
20	0.67344	0.73924	0.91099	1.0977	1.3527	1.4849	0.26076	0.32656	40
21	.67366	.73904	.91153	.0971	.3531	.4844	.26096	.32634	39
22	.67387	.73885	.91206	.0964	.3534	.4839	.26115	.32613	38
23	.67409	.73865	.91259	.0958	.3538	.4835	.26135	.32591	37
24	.67430	.73845	.91312	.0951	.3542	.4830	.26154	.32570	36
25	0.67452	0.73826	0.91366	1.0945	1.3545	1.4825	0.26174	0.32548	35
26	.67473	.73806	.91419	.0939	.3549	.4821	.26194	.32527	34
27	.67495	.73787	.91473	.0932	.3552	.4816	.26213	.32505	33
28	.67516	.73767	.91526	.0926	.3556	.4811	.26233	.32484	32
29	.67537	.73747	.91580	.0919	.3560	.4806	.26253	.32462	31
30	0.67559	0.73728	0.91633	1.0913	1.3563	1.4802	0.26272	0.32441	30
31	.67580	.73708	.91687	.0907	.3567	.4797	.26292	.32419	29
32	.67602	.73688	.91740	.0900	.3571	.4792	.26311	.32398	28
33	.67623	.73669	.91794	.0894	.3574	.4788	.26331	.32377	27
34	.67645	.73649	.91847	.0888	.3578	.4783	.26351	.32355	26
35	0.67666	0.73629	0.91901	1.0881	1.3581	1.4778	0.26371	0.32334	25
36	.67688	.73610	.91955	.0875	.3585	.4774	.26390	.32312	24
37	.67709	.73590	.92008	.0868	.3589	.4769	.26410	.32291	23
38	.67730	.73570	.92062	.0862	.3592	.4764	.26430	.32269	22
39	.67752	.73551	.92116	.0856	.3596	.4760	.26449	.32248	21
40	0.67773	0.73531	0.92170	1.0849	1.3600	1.4755	0.26469	0.32227	20
41	.67794	.73511	.92223	.0843	.3603	.4750	.26489	.32205	19
42	.67816	.73491	.92277	.0837	.3607	.4746	.26508	.32184	18
43	.67837	.73472	.92331	.0830	.3611	.4741	.26528	.32163	17
44	.67859	.73452	.92385	.0824	.3614	.4736	.26548	.32141	16
45	0.67880	0.73432	0.92439	1.0818	1.3618	1.4732	0.26568	0.32120	15
46	.67901	.73412	.92493	.0812	.3622	.4727	.26587	.32098	14
47	.67923	.73393	.92547	.0805	.3625	.4723	.26607	.32077	13
48	.67944	.73373	.92601	.0799	.3629	.4718	.26627	.32056	12
49	.67965	.73353	.92655	.0793	.3633	.4713	.26647	.32034	11
50	0.67987	0.73333	0.92709	1.0786	1.3636	1.4709	0.26666	0.32013	10
51	.68008	.73314	.92763	.0780	.3640	.4704	.26686	.31992	9
52	.68029	.73294	.92817	.0774	.3644	.4699	.26706	.31970	8
53	.68051	.73274	.92871	.0767	.3647	.4695	.26726	.31949	7
54	.68072	.73254	.92926	.0761	.3651	.4690	.26746	.31928	6
55	0.68093	0.73234	0.92980	1.0755	1.3655	1.4686	0.26765	0.31907	5
56	.68115	.73215	.93034	.0749	.3658	.4681	.26785	.31885	4
57	.68136	.73195	.93088	.0742	.3662	.4676	.26805	.31864	3
58	.68157	.73175	.93143	.0736	.3666	.4672	.26825	.31843	2
59	.68178	.73155	.93197	.0730	.3669	.4667	.26845	.31821	1
60	0.68200	0.73135	0.93251	1.0724	1.3673	1.4663	0.26865	0.31800	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.68200	0.73135	0.93251	1.0724	1.3673	1.4663	0.26865	0.31800	60
1	.68221	.73115	.93306	.0717	.3677	.4658	.26884	.31779	59
2	.68242	.73096	.93360	.0711	.3681	.4654	.26904	.31758	58
3	.68264	.73076	.93415	.0705	.3684	.4649	.26924	.31736	57
4	.68285	.73056	.93469	.0699	.3688	.4644	.26944	.31715	56
5	0.68306	0.73036	0.93524	1.0692	1.3692	1.4640	0.26964	0.31694	55
6	.68327	.73016	.93578	.0686	.3695	.4635	.26984	.31673	54
7	.68349	.72996	.93633	.0680	.3699	.4631	.27004	.31651	53
8	.68370	.72976	.93687	.0674	.3703	.4626	.27023	.31630	52
9	.68391	.72956	.93742	.0667	.3707	.4622	.27043	.31609	51
10	0.68412	0.72937	0.93797	1.0661	1.3710	1.4617	0.27063	0.31588	50
11	.68433	.72917	.93851	.0655	.3714	.4613	.27083	.31566	49
12	.68455	.72897	.93906	.0649	.3718	.4608	.27103	.31545	48
13	.68476	.72877	.93961	.0643	.3722	.4604	.27123	.31524	47
14	.68497	.72857	.94016	.0636	.3725	.4599	.27143	.31503	46
15	0.68518	0.72837	0.94071	1.0630	1.3729	1.4595	0.27163	0.31482	45
16	.68539	.72817	.94125	.0624	.3733	.4590	.27183	.31460	44
17	.68561	.72797	.94180	.0618	.3737	.4586	.27203	.31439	43
18	.68582	.72777	.94235	.0612	.3740	.4581	.27223	.31418	42
19	.68603	.72757	.94290	.0605	.3744	.4577	.27243	.31397	41
20	0.68624	0.72737	0.94345	1.0599	1.3748	1.4572	0.27263	0.31376	40
21	.68645	.72717	.94400	.0593	.3752	.4568	.27283	.31355	39
22	.68666	.72697	.94455	.0587	.3756	.4563	.27302	.31333	38
23	.68688	.72677	.94510	.0581	.3759	.4559	.27322	.31312	37
24	.68709	.72657	.94565	.0575	.3763	.4554	.27342	.31291	36
25	0.68730	0.72637	0.94620	1.0558	1.3767	1.4550	0.27362	0.31270	35
26	.68751	.72617	.94675	.0552	.3771	.4545	.27382	.31249	34
27	.68772	.72597	.94731	.0546	.3774	.4541	.27402	.31228	33
28	.68793	.72577	.94786	.0540	.3778	.4536	.27422	.31207	32
29	.68814	.72557	.94841	.0534	.3782	.4532	.27442	.31186	31
30	0.68835	0.72537	0.94896	1.0538	1.3786	1.4527	0.27462	0.31164	30
31	.68856	.72517	.94952	.0532	.3790	.4523	.27482	.31143	29
32	.68878	.72497	.95007	.0525	.3794	.4518	.27503	.31122	28
33	.68899	.72477	.95062	.0519	.3797	.4514	.27523	.31101	27
34	.68920	.72457	.95118	.0513	.3801	.4510	.27543	.31080	26
35	0.68941	0.72437	0.95173	1.0507	1.3805	1.4505	0.27563	0.31059	25
36	.68962	.72417	.95229	.0501	.3809	.4501	.27583	.31038	24
37	.68983	.72397	.95284	.0495	.3813	.4496	.27603	.31017	23
38	.69004	.72377	.95340	.0489	.3816	.4492	.27623	.30996	22
39	.69025	.72357	.95395	.0483	.3820	.4487	.27643	.30975	21
40	0.69046	0.72337	0.95451	1.0476	1.3824	1.4483	0.27663	0.30954	20
41	.69067	.72317	.95506	.0470	.3828	.4479	.27683	.30933	19
42	.69088	.72297	.95562	.0464	.3832	.4474	.27703	.30912	18
43	.69109	.72277	.95618	.0458	.3836	.4470	.27723	.30891	17
44	.69130	.72257	.95673	.0452	.3839	.4465	.27743	.30870	16
45	0.69151	0.72237	0.95729	1.0446	1.3843	1.4461	0.27764	0.30849	15
46	.69172	.72216	.95785	.0440	.3847	.4457	.27784	.30828	14
47	.69193	.72196	.95841	.0434	.3851	.4452	.27804	.30807	13
48	.69214	.72176	.95896	.0428	.3855	.4448	.27824	.30786	12
49	.69235	.72156	.95952	.0422	.3859	.4443	.27844	.30765	11
50	0.69256	0.72136	0.96008	1.0416	1.3863	1.4439	0.27864	0.30744	10
51	.69277	.72115	.96064	.0410	.3867	.4435	.27884	.30723	9
52	.69298	.72095	.96120	.0404	.3870	.4430	.27904	.30702	8
53	.69319	.72075	.96176	.0397	.3874	.4426	.27925	.30681	7
54	.69340	.72055	.96232	.0391	.3878	.4422	.27945	.30660	6
55	0.69361	0.72035	0.96288	1.0385	1.3882	1.4417	0.27965	0.30639	5
56	.69382	.72015	.96344	.0379	.3886	.4413	.27985	.30618	4
57	.69403	.71994	.96400	.0373	.3890	.4408	.28005	.30597	3
58	.69424	.71974	.96456	.0367	.3894	.4404	.28026	.30576	2
59	.69445	.71954	.96513	.0361	.3898	.4400	.28046	.30555	1
60	0.69466	0.71934	0.96569	1.0355	1.3902	1.4395	0.28066	0.30534	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M



M	Sine	Cosine	Tan.	Cotan.	Secant	Cosec.	Vrs. Sin.	Vrs. Cos.	M
0	0.69466	0.71934	0.96569	1.0355	1.3902	1.4395	0.28066	0.30534	60
1	.69457	.71924	.96525	.0249	.3905	.4391	.28036	.30513	59
2	.69503	.71893	.96631	.0243	.3909	.4387	.28106	.30492	58
3	.69528	.71873	.96738	.0237	.3913	.4382	.28127	.30471	57
4	.69549	.71853	.96794	.0231	.3917	.4378	.28147	.30450	56
5	0.69570	0.71833	0.96850	1.0325	1.3921	1.4374	0.28167	0.30430	55
6	.69591	.71813	.96907	.0219	.3925	.4370	.28187	.30409	54
7	.69612	.71792	.96963	.0213	.3929	.4365	.28208	.30388	53
8	.69633	.71772	.97020	.0207	.3933	.4361	.28228	.30367	52
9	.69654	.71752	.97076	.0201	.3937	.4357	.28248	.30346	51
10	0.69675	0.71732	0.97133	1.0295	1.3941	1.4352	0.28268	0.30325	50
11	.69696	.71711	.97189	.0209	.3945	.4348	.28289	.30304	49
12	.69716	.71691	.97246	.0203	.3949	.4344	.28309	.30283	48
13	.69737	.71671	.97302	.0207	.3953	.4339	.28329	.30263	47
14	.69753	.71650	.97359	.0211	.3957	.4335	.28349	.30242	46
15	0.69779	0.71630	0.97416	1.0265	1.3960	1.4331	0.28370	0.30221	45
16	.69800	.71610	.97472	.0209	.3964	.4327	.28390	.30200	44
17	.69821	.71589	.97529	.0203	.3968	.4322	.28410	.30179	43
18	.69841	.71569	.97586	.0207	.3972	.4318	.28431	.30158	42
19	.69862	.71549	.97643	.0201	.3976	.4314	.28451	.30138	41
20	0.69883	0.71529	0.97700	1.0235	1.3980	1.4310	0.28471	0.30117	40
21	.69904	.71508	.97756	.0209	.3984	.4305	.28492	.30096	39
22	.69925	.71488	.97813	.0223	.3988	.4301	.28512	.30075	38
23	.69945	.71468	.97870	.0218	.3992	.4297	.28532	.30054	37
24	.69966	.71447	.97927	.0212	.3996	.4292	.28553	.30034	36
25	0.69987	0.71427	0.97984	1.0206	1.4000	1.4288	0.28573	0.30013	35
26	.70008	.71406	.98041	.0200	.4004	.4284	.28593	.29992	34
27	.70029	.71386	.98098	.0194	.4008	.4280	.28614	.29971	33
28	.70049	.71366	.98155	.0188	.4012	.4276	.28634	.29950	32
29	.70070	.71345	.98212	.0182	.4016	.4271	.28654	.29930	31
30	0.70091	0.71325	0.98270	1.0176	1.4020	1.4267	0.28675	0.29909	30
31	.70112	.71305	.98327	.0170	.4024	.4263	.28695	.29888	29
32	.70132	.71284	.98384	.0164	.4028	.4259	.28716	.29867	28
33	.70153	.71264	.98441	.0158	.4032	.4254	.28736	.29847	27
34	.70174	.71243	.98499	.0152	.4036	.4250	.28756	.29826	26
35	0.70194	0.71223	0.98556	1.0146	1.4040	1.4246	0.28777	0.29805	25
36	.70215	.71203	.98613	.0141	.4044	.4242	.28797	.29785	24
37	.70236	.71182	.98671	.0135	.4048	.4238	.28818	.29764	23
38	.70257	.71162	.98728	.0129	.4052	.4233	.28838	.29743	22
39	.70277	.71141	.98786	.0123	.4056	.4229	.28859	.29722	21
40	0.70298	0.71121	0.98843	1.0117	1.4060	1.4225	0.28879	0.29702	20
41	.70319	.71100	.98901	.0111	.4065	.4221	.28899	.29681	19
42	.70339	.71080	.98958	.0105	.4069	.4217	.28920	.29660	18
43	.70360	.71059	.99016	.0099	.4073	.4212	.28940	.29640	17
44	.70381	.71039	.99073	.0093	.4077	.4208	.28961	.29619	16
45	0.70401	0.71018	0.99131	1.0088	1.4081	1.4204	0.28981	0.29598	15
46	.70422	.70998	.99189	.0082	.4085	.4200	.29002	.29578	14
47	.70443	.70977	.99246	.0076	.4089	.4196	.29022	.29557	13
48	.70463	.70957	.99304	.0070	.4093	.4192	.29043	.29536	12
49	.70484	.70936	.99362	.0064	.4097	.4188	.29063	.29516	11
50	0.70505	0.70916	0.99420	1.0058	1.4101	1.4183	0.29084	0.29495	10
51	.70525	.70895	.99478	.0052	.4105	.4179	.29104	.29475	9
52	.70546	.70875	.99536	.0047	.4109	.4175	.29125	.29454	8
53	.70566	.70854	.99593	.0041	.4113	.4171	.29145	.29433	7
54	.70587	.70834	.99651	.0035	.4117	.4167	.29166	.29413	6
55	0.70608	0.70813	0.99709	1.0029	1.4122	1.4163	0.29186	0.29392	5
56	.70628	.70793	.99767	.0023	.4126	.4159	.29207	.29372	4
57	.70649	.70772	.99826	.0017	.4130	.4154	.29228	.29351	3
58	.70669	.70752	.99884	.0012	.4134	.4150	.29248	.29330	2
59	.70690	.70731	.99942	.0006	.4138	.4146	.29269	.29310	1
60	0.70711	0.70711	1.00000	1.0000	1.4142	1.4142	0.29289	0.29289	0
M	Cosine	Sine	Cotan.	Tan.	Cosec.	Secant	Vrs. Cos.	Vrs. Sin.	M

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.			
100	00	000	043	087	130	173	217	260	303	346	389		44	43	42
101		432	475	518	561	604	647	689	732	775	817	1	4.4	4.3	4.2
102		860	903	945	988	*030	*072	*115	*157	*199	*242	2	8.8	8.6	8.4
103	01	284	326	368	410	452	494	536	578	620	662	3	13.2	12.9	12.6
104		703	745	787	828	870	912	953	995	*036	*078	4	17.6	17.2	16.8
105	02	119	160	202	243	284	325	366	407	449	490	5	22.0	21.5	21.0
106		531	572	612	653	694	735	776	816	857	898	6	26.4	25.8	25.2
107		938	979	*019	*060	*100	*141	*181	*222	*262	*302	7	30.8	30.1	29.4
108	03	342	383	423	463	503	543	583	623	663	703	8	35.2	34.4	33.6
109		743	782	822	862	902	941	981	*021	*060	*100	9	39.6	38.7	37.8
110	04	139	179	218	258	297	336	376	415	454	493		41	40	39
111		532	571	610	650	689	727	766	805	844	883	1	4.1	4.0	3.9
112		922	961	999	*038	*077	*115	*154	*192	*231	*269	2	8.2	8.0	7.8
113	05	308	346	385	423	461	500	538	576	614	652	3	12.3	12.0	11.7
114		690	729	767	805	843	881	918	956	994	*032	4	16.4	16.0	15.6
115	06	070	108	145	183	221	258	296	333	371	408	5	20.5	20.0	19.5
116		446	483	521	558	595	633	670	707	744	781	6	24.6	24.0	23.4
117		819	856	893	930	967	*004	*041	*078	*115	*151	7	28.7	28.0	27.3
118	07	188	225	262	298	335	372	408	445	482	518	8	32.8	32.0	31.2
119		555	591	628	664	700	737	773	809	846	882	9	36.9	36.0	35.1
120		918	954	990	*027	*063	*099	*135	*171	*207	*243		38	37	36
121	08	279	314	350	386	422	458	493	529	565	600	1	3.8	3.7	3.6
122		636	672	707	743	778	814	849	884	920	955	2	7.6	7.4	7.2
123		991	*026	*061	*096	*132	*167	*202	*237	*272	*307	3	11.4	11.1	10.8
124	09	342	377	412	447	482	517	552	587	621	656	4	15.2	14.8	14.4
125		691	726	760	795	830	864	899	934	968	*003	5	19.0	18.5	18.0
126	10	037	072	106	140	175	209	243	278	312	346	6	22.8	22.2	21.6
127		380	415	449	483	517	551	585	619	653	687	7	26.6	25.9	25.2
128		721	755	789	823	857	890	924	958	992	*025	8	30.4	29.6	28.8
129	11	059	093	126	160	193	227	261	294	327	361	9	34.2	33.3	32.4
130		394	428	461	494	528	561	594	628	661	694		35	34	33
131		727	760	793	826	860	893	926	959	992	*024	1	3.5	3.4	3.3
132	12	057	090	123	156	189	222	254	287	320	352	2	7.0	6.8	6.6
133		385	418	450	483	516	548	581	613	646	678	3	10.5	10.2	9.9
134		710	743	775	808	840	872	905	937	969	*001	4	14.0	13.6	13.2
135	13	033	066	098	130	162	194	226	258	290	322	5	17.5	17.0	16.5
136		354	386	418	450	481	513	545	577	609	640	6	21.0	20.4	19.8
137		672	704	735	767	799	830	862	893	925	956	7	24.5	23.8	23.1
138		988	*019	*051	*082	*114	*145	*176	*208	*239	*270	8	28.0	27.2	26.4
139	14	301	333	364	395	426	457	489	520	551	582	9	31.5	30.6	29.7
140		613	644	675	706	737	768	799	829	860	891		32	31	30
141		922	953	983	*014	*045	*076	*106	*137	*168	*198	1	3.2	3.1	3.0
142	15	229	259	290	320	351	381	412	442	473	503	2	6.4	6.2	6.0
143		534	564	594	625	655	685	715	746	776	806	3	9.6	9.3	9.0
144		836	866	897	927	957	987	*017	*047	*077	*107	4	12.8	12.4	12.0
145	16	137	167	197	227	256	286	316	346	376	406	5	16.0	15.5	15.0
146		435	465	495	524	554	584	613	643	673	702	6	19.2	18.6	18.0
147		732	761	791	820	850	879	909	938	967	997	7	22.4	21.7	21.0
148	17	026	056	085	114	143	173	202	231	260	289	8	25.6	24.8	24.0
149		319	348	377	406	435	464	493	522	551	580	9	28.8	27.9	27.0
150		609	638	667	696	725	754	782	811	840	869				

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.	
150	17	609	638	667	696	725	754	782	811	840	869	29	28
151		898	926	955	984	*013	*041	*070	*099	*127	*156	1	2.9 2.8
152	18	184	213	241	270	298	327	355	384	412	441	2	5.8 5.6
153		469	498	526	554	583	611	639	667	696	724	3	8.7 8.4
154		752	780	808	837	865	893	921	949	977	*005	4	11.6 11.2
155	19	033	061	089	117	145	173	201	229	257	285	5	14.5 14.0
156		312	340	368	396	424	451	479	507	535	562	6	17.4 16.8
157		590	618	645	673	700	728	756	783	811	838	7	20.3 19.6
158		866	893	921	948	976	*003	*030	*058	*085	*112	8	23.2 22.4
159	20	140	167	194	222	249	276	303	330	358	385	9	26.1 25.2
160		412	439	466	493	520	548	575	602	629	656	27 26	
161		683	710	737	763	790	817	844	871	898	925	1	2.7 2.6
162		952	978	*005	*032	*059	*085	*112	*139	*165	*192	2	5.4 5.2
163	21	219	245	272	299	325	352	378	405	431	458	3	8.1 7.8
164		484	511	537	564	590	617	643	669	696	722	4	10.8 10.4
165		748	775	801	827	854	880	906	932	958	985	5	13.5 13.0
166	22	011	037	063	089	115	141	167	194	220	246	6	16.2 15.6
167		272	298	324	350	376	401	427	453	479	505	7	18.9 18.2
168		531	557	583	608	634	660	686	712	737	763	8	21.6 20.8
169		789	814	840	866	891	917	943	968	994	*019	9	24.3 23.4
170	23	045	070	096	121	147	172	198	223	249	274	25	
171		300	325	350	376	401	426	452	477	502	528	1	2.5
172		553	578	603	629	654	679	704	729	754	779	2	5.0
173		805	830	855	880	905	930	955	980	*005	*030	3	7.5
174	24	055	080	105	130	155	180	204	229	254	279	4	10.0
175		304	329	353	378	403	428	452	477	502	527	5	12.5
176		551	576	601	625	650	674	699	724	748	773	6	15.0
177		797	822	846	871	895	920	944	969	993	*018	7	17.5
178	25	042	066	091	115	139	164	188	212	237	261	8	20.0
179		285	310	334	358	382	406	431	455	479	503	9	22.5
180		527	551	575	600	624	648	672	696	720	744	24 23	
181		768	792	816	840	864	888	912	935	959	983	1	2.4 2.3
182	26	007	031	055	079	102	126	150	174	198	221	2	4.8 4.6
183		245	269	293	316	340	364	387	411	435	458	3	7.2 6.9
184		482	505	529	553	576	600	623	647	670	694	4	9.6 9.2
185		717	741	764	788	811	834	858	881	905	928	5	12.0 11.5
186		951	975	998	*021	*045	*068	*091	*114	*138	*161	6	14.4 13.8
187	27	184	207	*231	254	277	300	323	346	370	393	7	16.8 16.1
188		416	439	462	485	508	531	554	577	600	623	8	19.2 18.4
189		646	669	692	715	738	761	784	807	830	852	9	21.6 20.7
190		875	898	921	944	967	989	*012	*035	*058	*081	22 21	
191	28	103	126	149	171	194	217	240	262	285	307	1	2.2 2.1
192		330	353	375	398	421	443	466	488	511	533	2	4.4 4.2
193		556	578	601	623	646	668	691	713	735	758	3	6.6 6.3
194		780	803	825	847	870	892	914	937	959	981	4	8.8 8.4
195	29	003	026	048	070	092	115	137	159	181	203	5	11.0 10.5
196		226	248	270	292	314	336	358	380	403	425	6	13.2 12.6
197		447	469	491	513	535	557	579	601	623	645	7	15.4 14.7
198		667	688	710	732	754	776	798	820	842	863	8	17.6 16.8
199		885	907	929	951	973	994	*016	*038	*060	*081	9	19.8 18.9
200	30	103	125	146	168	190	211	233	255	276	298		

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
200	30	103	125	146	168	190	211	233	255	276	298	22 21
201		320	341	363	384	406	428	449	471	492	514	1 2.2 2.1
202		535	557	578	600	621	643	664	685	707	728	2 4.4 4.2
203		750	771	792	814	835	856	878	899	920	942	3 6.6 6.3
204		963	984	*006	*027	*048	*069	*091	*112	*133	*154	4 8.8 8.4
205	31	175	197	218	239	260	281	302	323	345	366	5 11.0 10.5
206		387	408	429	450	471	492	513	534	555	576	6 13.2 12.6
207		597	618	639	660	681	702	723	744	765	785	7 15.4 14.7
208		806	827	848	869	890	911	931	952	973	994	8 17.6 16.8
209	32	015	035	056	077	098	118	139	160	181	201	9 19.8 18.9
210		222	243	263	284	305	325	346	366	387	408	20
211		428	449	469	490	510	531	552	572	593	613	1 2.0
212		634	654	675	695	715	736	756	777	797	818	2 4.0
213		838	858	879	899	919	940	960	980	*001	*021	3 6.0
214	33	041	062	082	102	122	143	163	183	203	224	4 8.0
215		244	264	284	304	325	345	365	385	405	425	5 10.0
216		445	465	486	506	526	546	566	586	606	626	6 12.0
217		646	666	686	706	726	746	766	786	806	826	7 14.0
218		846	866	885	905	925	945	965	985	*005	*025	8 16.0
219	34	044	064	084	104	124	143	163	183	203	223	9 18.0
220		242	262	282	301	321	341	361	380	400	420	19
221		439	459	479	498	518	537	557	577	596	616	1 1.9
222		635	655	674	694	713	733	753	772	792	811	2 3.8
223		830	850	869	889	908	928	947	967	986	*005	3 5.7
224	35	025	044	064	083	102	122	141	160	180	199	4 7.6
225		218	238	257	276	295	315	334	353	372	392	5 9.5
226		411	430	449	468	488	507	526	545	564	583	6 11.4
227		603	622	641	660	679	698	717	736	755	774	7 13.3
228		793	813	832	851	870	889	908	927	946	965	8 15.2
229		984	*003	*021	*040	*059	*078	*097	*116	*135	*154	9 17.1
230	36	173	192	211	229	248	267	286	305	324	342	18
231		361	380	399	418	436	455	474	493	511	530	1 1.8
232		549	568	586	605	624	642	661	680	698	717	2 3.6
233		736	754	773	791	810	829	847	866	884	903	3 5.4
234		922	940	959	977	996	*014	*033	*051	*070	*088	4 7.2
235	37	107	125	144	162	181	199	218	236	254	273	5 9.0
236		291	310	328	346	365	383	401	420	438	457	6 10.8
237		475	493	511	530	548	566	585	603	621	639	7 12.6
238		658	676	694	712	731	749	767	785	803	822	8 14.4
239		840	858	876	894	912	931	949	967	985	*003	9 16.2
240	38	021	039	057	075	093	112	130	148	166	184	17
241		202	220	238	256	274	292	310	328	346	364	1 1.7
242		382	399	417	435	453	471	489	507	525	543	2 3.4
243		561	578	596	614	632	650	668	686	703	721	3 5.1
244		739	757	775	792	810	828	846	863	881	899	4 6.8
245		917	934	952	970	987	*005	*023	*041	*058	*076	5 8.5
246	39	094	111	129	146	164	182	199	217	235	252	6 10.2
247		270	287	305	322	340	358	375	393	410	428	7 11.9
248		445	463	480	498	515	533	550	568	585	602	8 13.6
249		620	637	655	672	690	707	724	742	759	777	9 15.3
250		794	811	829	846	863	881	898	915	933	950	

Tables of Logarithms

N.	L.	o	1	2	3	4	5	6	7	8	9	P. P.
250	39	794	811	829	846	863	881	898	915	933	950	18
251		967	985	*002	*019	*037	*054	*071	*088	*106	*123	1 1.8
252	40	140	157	175	192	209	226	243	261	278	295	2 3.6
253		312	329	346	364	381	398	415	432	449	466	3 5.4
254		483	500	518	535	552	569	586	603	620	637	4 7.2
255		654	671	688	705	722	739	756	773	790	807	5 9.0
256		824	841	858	875	892	909	926	943	960	976	6 10.8
257		993	*010	*027	*044	*061	*078	*095	*111	*128	*145	7 12.6
258	41	162	179	196	212	229	246	263	280	296	313	8 14.4
259		330	347	363	380	397	414	430	447	464	481	9 16.2
260		497	514	531	547	564	581	597	614	631	647	17
261		664	681	697	714	731	747	764	780	797	814	1 1.7
262		830	847	863	880	896	913	929	946	963	979	2 3.4
263		996	*012	*029	*045	*062	*078	*095	*111	*127	*144	3 5.1
264	42	160	177	193	210	226	243	259	275	292	308	4 6.8
265		325	341	357	374	390	406	423	439	455	472	5 8.5
266		488	504	521	537	553	570	586	602	619	635	6 10.2
267		651	667	684	700	716	732	749	765	781	797	7 11.9
268		813	830	846	862	878	894	911	927	943	959	8 13.6
269		975	991	*008	*024	*040	*056	*072	*088	*104	*120	9 15.3
270	43	136	152	169	185	201	217	233	249	265	281	16
271		297	313	329	345	361	377	393	409	425	441	1 1.6
272		457	473	489	505	521	537	553	569	584	600	2 3.2
273		616	632	648	664	680	696	712	727	743	759	3 4.8
274		775	791	807	823	838	854	870	886	902	917	4 6.4
275		933	949	965	981	996	*012	*028	*044	*059	*075	5 8.0
276	44	091	107	122	138	154	170	185	201	217	232	6 9.6
277		248	264	279	295	311	326	342	358	373	389	7 11.2
278		404	420	436	451	467	483	498	514	529	545	8 12.8
279		560	576	592	607	623	638	654	669	685	700	9 14.4
280		716	731	747	762	778	793	809	824	840	855	15
281		871	886	902	917	932	948	963	979	994	*010	1 1.5
282	45	025	040	056	071	086	102	117	133	148	163	2 3.0
283		179	194	209	225	240	255	271	286	301	317	3 4.5
284		332	347	362	378	393	408	423	439	454	469	4 6.0
285		484	500	515	530	545	561	576	591	606	621	5 7.5
286		637	652	667	682	697	712	728	743	758	773	6 9.0
287		788	803	818	834	849	864	879	894	909	924	7 10.5
288		939	954	969	984	*000	*015	*030	*045	*060	*075	8 12.0
289	46	090	105	120	135	150	165	180	195	210	225	9 13.5
290		240	255	270	285	300	315	330	345	359	374	14
291		389	404	419	434	449	464	479	494	509	523	1 1.4
292		538	553	568	583	598	613	627	642	657	672	2 2.8
293		687	702	716	731	746	761	776	790	805	820	3 4.2
294		835	850	864	879	894	909	923	938	953	967	4 5.6
295		982	997	*012	*026	*041	*056	*070	*085	*100	*114	5 7.0
296	47	129	144	159	173	188	202	217	232	246	261	6 8.4
297		276	290	305	319	334	349	363	378	392	407	7 9.8
298		422	436	451	465	480	494	509	524	538	553	8 11.2
299		567	582	596	611	625	640	654	669	683	698	9 12.6
300		712	727	741	756	770	784	799	813	828	842	



Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	F. P.
300	47	712	727	741	756	770	784	799	813	828	842	
301		857	871	885	900	914	929	943	958	972	986	
302	48	001	015	029	044	058	073	087	101	116	130	
303		144	159	173	187	202	216	230	244	259	273	15
304		287	302	316	330	344	359	373	387	401	416	1 1.5
305		430	444	458	473	487	501	515	530	544	558	2 3.0
306		572	586	601	615	629	643	657	671	686	700	3 4.5
307		714	728	742	756	770	785	799	813	827	841	4 6.0
308		855	869	883	897	911	926	940	954	968	982	5 7.5
309		996	*010	*024	*038	*052	*066	*080	*094	*108	*122	6 9.0
310	49	136	150	164	178	192	206	220	234	248	262	7 10.5
311		276	290	304	318	332	346	360	374	388	402	8 12.0
312		415	429	443	457	471	485	499	513	527	541	9 13.5
313		554	568	582	596	610	624	638	651	665	679	
314		693	707	721	734	748	762	776	790	803	817	
315		831	845	859	872	886	900	914	927	941	955	14
316		969	982	996	*010	*024	*037	*051	*065	*079	*092	1 1.4
317	50	106	120	133	147	161	174	188	202	215	229	2 2.8
318		243	256	270	284	297	311	325	338	352	365	3 4.2
319		379	393	406	420	433	447	461	474	488	501	4 5.6
320		515	529	542	556	569	583	596	610	623	637	5 7.0
321		651	664	678	691	705	718	732	745	759	772	6 8.4
322		786	799	813	826	840	853	866	880	893	907	7 9.8
323		920	934	947	961	974	987	*001	*014	*028	*041	8 11.2
324	51	055	068	081	095	108	121	135	148	162	175	9 12.6
325		188	202	215	228	242	255	268	282	295	308	
326		322	335	348	362	375	388	402	415	428	441	13
327		455	468	481	495	508	521	534	548	561	574	1 1.3
328		587	601	614	627	640	654	667	680	693	706	2 2.6
329		720	733	746	759	772	786	799	812	825	838	3 3.9
330		851	865	878	891	904	917	930	943	957	970	4 5.2
331		983	996	*009	*022	*035	*048	*061	*075	*088	*101	5 6.5
332	52	114	127	140	153	166	179	192	205	218	231	6 7.8
333		244	257	270	284	297	310	323	336	349	362	7 9.1
334		375	388	401	414	427	440	453	466	479	492	8 10.4
335		504	517	530	543	556	569	582	595	608	621	9 11.7
336		634	647	660	673	686	699	711	724	737	750	
337		763	776	789	802	815	827	840	853	866	879	
338		892	905	917	930	943	956	969	982	994	*007	12
339	53	020	033	046	059	071	084	097	110	122	135	1 1.2
340		148	161	173	186	199	212	224	237	250	263	2 2.4
341		275	288	301	314	326	339	352	364	377	390	3 3.6
342		403	415	428	441	453	466	479	491	504	517	4 4.8
343		529	542	555	567	580	593	605	618	631	643	5 6.0
344		656	668	681	694	706	719	732	744	757	769	6 7.2
345		782	794	807	820	832	845	857	870	882	895	7 8.4
346		908	920	933	945	958	970	983	995	*008	*020	8 9.6
347	54	033	045	058	070	083	095	108	120	133	145	9 10.8
348		158	170	183	195	208	220	233	245	258	270	
349		283	295	307	320	332	345	357	370	382	394	
350		407	419	432	444	456	469	481	494	506	518	

48 = 1.549708

# LOGARITHMS

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## Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
350	54	407	419	432	444	456	469	481	494	506	518	13 1 1.3 2 2.6 3 3.9 4 5.2 5 6.5 6 7.8 7 9.1 8 10.4 9 11.7
351		531	543	555	568	580	593	605	617	630	642	
352		654	667	679	691	704	716	728	741	753	765	
353		777	790	802	814	827	839	851	864	876	888	
354		900	913	925	937	949	962	974	986	998	*011	
355	55	023	035	047	060	072	084	096	108	121	133	
356		145	157	169	182	194	206	218	230	242	255	
357		267	279	291	303	315	328	340	352	364	376	
358		388	400	413	425	437	449	461	473	485	497	
359		509	522	534	546	558	570	582	594	606	618	
360		630	642	654	666	678	691	703	715	727	739	12 1 1.2 2 2.4 3 3.6 4 4.8 5 6.0 6 7.2 7 8.4 8 9.6 9 10.8
361		751	763	775	787	799	811	823	835	847	859	
362		871	883	895	907	919	931	943	955	967	979	
363		991	*003	*015	*027	*038	*050	*062	*074	*086	*098	
364	56	110	122	134	146	158	170	182	194	205	217	
365		229	241	253	265	277	289	301	312	324	336	
366		348	360	372	384	396	407	419	431	443	455	
367		467	478	490	502	514	526	538	549	561	573	
368		585	597	608	620	632	644	656	667	679	691	
369		703	714	726	738	750	761	773	785	797	808	
370		820	832	844	855	867	879	891	902	914	926	11 1 1.1 2 2.2 3 3.3 4 4.4 5 5.5 6 6.6 7 7.7 8 8.8 9 9.9
371		937	949	961	972	984	996	*008	*019	*031	*043	
372	57	054	066	078	089	101	113	124	136	148	159	
373		171	183	194	206	217	229	241	252	264	276	
374		287	299	310	322	334	345	357	368	380	392	
375		403	415	426	438	449	461	473	484	496	507	
376		519	530	542	553	565	576	588	600	611	623	
377		634	646	657	669	680	692	703	715	726	738	
378		749	761	772	784	795	807	818	830	841	852	
379		864	875	887	898	910	921	933	944	955	967	
380		978	990	*001	*013	*024	*035	*047	*058	*070	*081	10 1 1.0 2 2.0 3 3.0 4 4.0 5 5.0 6 6.0 7 7.0 8 8.0 9 9.0
381	58	092	104	115	127	138	149	161	172	184	195	
382		206	218	229	240	252	263	274	286	297	309	
383		320	331	343	354	365	377	388	399	410	422	
384		433	444	456	467	478	490	501	512	524	535	
385		546	557	569	580	591	602	614	625	636	647	
386		659	670	681	692	704	715	726	737	749	760	
387		771	782	794	805	816	827	838	850	861	872	
388		883	894	906	917	928	939	950	961	973	984	
389		995	*006	*017	*028	*040	*051	*062	*073	*084	*095	
390	59	106	118	129	140	151	162	173	184	195	207	9 1 1.0 2 2.0 3 3.0 4 4.0 5 5.0 6 6.0 7 7.0 8 8.0 9 9.0
391		218	229	240	251	262	273	284	295	306	318	
392		329	340	351	362	373	384	395	406	417	428	
393		439	450	461	472	483	494	506	517	528	539	
394		550	561	572	583	594	605	616	627	638	649	
395		660	671	682	693	704	715	726	737	748	759	
396		770	780	791	802	813	824	835	846	857	868	
397		879	890	901	912	923	934	945	956	966	977	
398		988	999	*010	*021	*032	*043	*054	*065	*076	*086	
399	60	097	108	119	130	141	152	163	173	184	195	
400		206	217	228	239	249	260	271	282	293	304	

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
400	60	206	217	228	239	249	260	271	282	293	304	
401		314	325	336	347	358	369	379	390	401	412	
402		423	433	444	455	466	477	487	498	509	520	
403		531	541	552	563	574	584	595	606	617	627	
404		638	649	660	670	681	692	703	713	724	735	
405		746	756	767	778	788	799	810	821	831	842	
406		853	863	874	885	895	906	917	927	938	949	II
407		959	970	981	991	*002	*013	*023	*034	*045	*055	I 1.1
408	61	066	077	087	098	109	119	130	140	151	162	2 2.2
409		172	183	194	204	215	225	236	247	257	268	3 3.3
410		278	289	300	310	321	331	342	352	363	374	4 4.4
411		384	395	405	416	426	437	448	458	469	479	5 5.5
412		490	500	511	521	532	542	553	563	574	584	6 6.6
413		595	606	616	627	637	648	658	669	679	690	7 7.7
414		700	711	721	731	742	752	763	773	784	794	8 8.8
415		805	815	826	836	847	857	868	878	888	899	9 9.9
416		909	920	930	941	951	962	972	982	993	*003	
417	62	014	024	034	045	055	066	076	086	097	107	
418		118	128	138	149	159	170	180	190	201	211	
419		221	232	242	252	263	273	284	294	304	315	IO
420		325	335	346	356	366	377	387	397	408	418	I 1.0
421		428	439	449	459	469	480	490	500	511	521	2 2.0
422		531	542	552	562	572	583	593	603	613	624	3 3.0
423		634	644	655	665	675	685	696	706	716	726	4 4.0
424		737	747	757	767	778	788	798	808	818	829	5 5.0
425		839	849	859	870	880	890	900	910	921	931	6 6.0
426		941	951	961	972	982	992	*002	*012	*022	*033	7 7.0
427	63	043	053	063	073	083	094	104	114	124	134	8 8.0
428		144	155	165	175	185	195	205	215	225	236	9 9.0
429		246	256	266	276	286	296	306	317	327	337	
430		347	357	367	377	387	397	407	417	428	438	
431		448	458	468	478	488	498	508	518	528	538	
432		548	558	568	579	589	599	609	619	629	639	
433		649	659	669	679	689	699	709	719	729	739	
434		749	759	769	779	789	799	809	819	829	839	
435		849	859	869	879	889	899	909	919	929	939	9
436		949	959	969	979	988	998	*008	*018	*028	*038	I 0.9
437	64	048	058	068	078	088	098	108	118	128	137	2 1.8
438		147	157	167	177	187	197	207	217	227	237	3 2.7
439		246	256	266	276	286	296	306	316	326	335	4 3.6
440		345	355	365	375	385	395	404	414	424	434	5 4.5
441		444	454	464	473	483	493	503	513	523	532	6 5.4
442		542	552	562	572	582	591	601	611	621	631	7 6.3
443		640	650	660	670	680	689	699	709	719	729	8 7.2
444		738	748	758	768	777	787	797	807	816	826	9 8.1
445		836	846	856	865	875	885	895	904	914	924	
446		933	943	953	963	972	982	992	*002	*011	*021	
447	65	031	040	050	060	070	079	089	099	108	118	
448		128	137	147	157	167	176	186	196	205	215	
449		225	234	244	254	263	273	283	292	302	312	
450		321	331	341	350	360	369	379	389	398	408	

Tables of Logarithms

N.	L.	o	i	2	3	4	5	6	7	8	9	P. P.
450	65	321	331	341	350	360	369	379	389	398	408	
451		418	427	437	447	456	466	475	485	495	504	
452		514	523	533	543	552	562	571	581	591	600	
453		610	619	629	639	648	658	667	677	686	696	
454		706	715	725	734	744	753	763	772	782	792	
455		801	811	820	830	839	849	858	868	877	887	
456		896	906	916	925	935	944	954	963	973	982	
457		992	*001	*011	*020	*030	*039	*049	*058	*068	*077	10
458	66	087	096	106	115	124	134	143	153	162	172	11.0
459		181	191	200	210	219	229	238	247	257	266	22.0
460		276	285	295	304	314	323	332	342	351	361	33.0
461		370	380	389	398	408	417	427	436	445	455	44.0
462		464	474	483	492	502	511	521	530	539	549	55.0
463		558	567	577	586	596	605	614	624	633	642	66.0
464		652	661	671	680	689	699	708	717	727	736	77.0
465		745	755	764	773	783	792	801	811	820	829	88.0
466		839	848	857	867	876	885	894	904	913	922	99.0
467		932	941	950	960	969	978	987	997	*006	*015	
468	67	025	034	043	052	062	071	080	089	099	108	
469		117	127	136	145	154	164	173	182	191	201	
470		210	219	228	237	247	256	265	274	284	293	9
471		302	311	321	330	339	348	357	367	376	385	10.9
472		394	403	413	422	431	440	449	459	468	477	21.8
473		486	495	504	514	523	532	541	550	560	569	32.7
474		578	587	596	605	614	624	633	642	651	660	43.6
475		669	679	688	697	706	715	724	733	742	752	54.5
476		761	770	779	788	797	806	815	825	834	843	65.4
477		852	861	870	879	888	897	906	916	925	934	76.3
478		943	952	961	970	979	988	997	*006	*015	*024	87.2
479	68	034	043	052	061	070	079	088	097	106	115	98.1
480		124	133	142	151	160	169	178	187	196	205	
481		215	224	233	242	251	260	269	278	287	296	
482		305	314	323	332	341	350	359	368	377	386	
483		395	404	413	422	431	440	449	458	467	476	
484		485	494	502	511	520	529	538	547	556	565	8
485		574	583	592	601	610	619	628	637	646	655	10.8
486		664	673	681	690	699	708	717	726	735	744	21.6
487		753	762	771	780	789	797	806	815	824	833	32.4
488		842	851	860	869	878	886	895	904	913	922	43.2
489		931	940	949	958	966	975	984	993	*002	*011	54.0
490	69	020	028	037	046	055	064	073	082	090	099	64.8
491		108	117	126	135	144	152	161	170	179	188	75.6
492		197	205	214	223	232	241	249	258	267	276	86.4
493		285	294	302	311	320	329	338	346	355	364	97.2
494		373	381	390	399	408	417	425	434	443	452	
495		461	469	478	487	496	504	513	522	531	539	
496		548	557	566	574	583	592	601	609	618	627	
497		636	644	653	662	671	679	688	697	705	714	
498		723	732	740	749	758	767	775	784	793	801	
499		810	819	827	836	845	854	862	871	880	888	
500		897	906	914	923	932	940	949	958	966	975	

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
500	69	897	906	914	923	932	940	949	958	966	975	
501		984	992	*001	*010	*018	*027	*036	*044	*053	*062	
502	70	070	079	088	096	105	114	122	131	140	148	
503		157	165	174	183	191	200	209	217	226	234	
504		243	252	260	269	278	286	295	303	312	321	
505		329	338	346	355	364	372	381	389	398	406	
506		415	424	432	441	449	458	467	475	484	492	9
507		501	509	518	526	535	544	552	561	569	578	10.9
508		586	595	603	612	621	629	638	646	655	663	21.8
509		672	680	689	697	706	714	723	731	740	749	32.7
510		757	766	774	783	791	800	808	817	825	834	43.6
511		842	851	859	868	876	885	893	902	910	919	54.5
512		927	935	944	952	961	969	978	986	995	*003	65.4
513	71	012	020	029	037	046	054	063	071	079	088	76.3
514		096	105	113	122	130	139	147	155	164	172	87.2
515		181	189	198	206	214	223	231	240	248	257	98.1
516		265	273	282	290	299	307	315	324	332	341	
517		349	357	366	374	383	391	399	408	416	425	
518		433	441	450	458	466	475	483	492	500	508	
519		517	525	533	542	550	559	567	575	584	592	
520		600	609	617	625	634	642	650	659	667	675	8
521		684	692	700	709	717	725	734	742	750	759	10.8
522		767	775	784	792	800	809	817	825	834	842	21.6
523		850	858	867	875	883	892	900	908	917	925	32.4
524		933	941	950	958	966	975	983	991	999	*008	43.2
525	72	016	024	032	041	049	057	066	074	082	090	54.0
526		099	107	115	123	132	140	148	156	165	173	64.8
527		181	189	198	206	214	222	230	239	247	255	75.6
528		263	272	280	288	296	304	313	321	329	337	86.4
529		346	354	362	370	378	387	395	403	411	419	97.2
530		428	436	444	452	460	469	477	485	493	501	
531		509	518	526	534	542	550	558	567	575	583	
532		591	599	607	616	624	632	640	648	656	665	
533		673	681	689	697	705	713	722	730	738	746	
534		754	762	770	779	787	795	803	811	819	827	7
535		835	843	852	860	868	876	884	892	900	908	10.7
536		916	925	933	941	949	957	965	973	981	989	21.4
537		997	*006	*014	*022	*030	*038	*046	*054	*062	*070	32.1
538	73	078	086	094	102	111	119	127	135	143	151	42.8
539		159	167	175	183	191	199	207	215	223	231	53.5
540		239	247	255	263	272	280	288	296	304	312	64.2
541		320	328	336	344	352	360	368	376	384	392	74.9
542		400	408	416	424	432	440	448	456	464	472	85.6
543		480	488	496	504	512	520	528	536	544	552	96.3
544		560	568	576	584	592	600	608	616	624	632	
545		640	648	656	664	672	679	687	695	703	711	
546		719	727	735	743	751	759	767	775	783	791	
547		799	807	815	823	830	838	846	854	862	870	
548		878	886	894	902	910	918	926	933	941	949	
549		957	965	973	981	989	997	*005	*013	*020	*028	
550	74	036	044	052	060	068	076	084	092	099	107	



Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
550	74	036	044	052	060	068	076	084	092	099	107	
551		115	123	131	139	147	155	162	170	178	186	
552		194	202	210	218	225	233	241	249	257	265	
553		273	280	288	296	304	312	320	327	335	343	
554		351	359	367	374	382	390	398	406	414	421	
555		429	437	445	453	461	468	476	484	492	500	
556		507	515	523	531	539	547	554	562	570	578	
557		586	593	601	609	617	624	632	640	648	656	
558		663	671	679	687	695	702	710	718	726	733	
559		741	749	757	764	772	780	788	796	803	811	
560		819	827	834	842	850	858	865	873	881	889	8
561		896	904	912	920	927	935	943	950	958	966	1 0.8
562		974	981	989	997	*005	*012	*020	*028	*035	*043	2 1.6
563	75	051	059	066	074	082	089	097	105	113	120	3 2.4
564		128	136	143	151	159	166	174	182	189	197	4 3.2
565		205	213	220	228	236	243	251	259	266	274	5 4.0
566		282	289	297	305	312	320	328	335	343	351	6 4.8
567		358	366	374	381	389	397	404	412	420	427	7 5.6
568		435	442	450	458	465	473	481	488	496	504	8 6.4
569		511	519	526	534	542	549	557	565	572	580	9 7.2
570		587	595	603	610	618	626	633	641	648	656	
571		664	671	679	686	694	702	709	717	724	732	
572		740	747	755	762	770	778	785	793	800	808	
573		815	823	831	838	846	853	861	868	876	884	
574		891	899	906	914	921	929	937	944	952	959	
575		967	974	982	989	997	*005	*012	*020	*027	*035	
576	76	042	050	057	065	072	080	087	095	103	110	
577		118	125	133	140	148	155	163	170	178	185	
578		193	200	208	215	223	230	238	245	253	260	
579		268	275	283	290	298	305	313	320	328	335	
580		343	350	358	365	373	380	388	395	403	410	
581		418	425	433	440	448	455	462	470	477	485	7
582		492	500	507	515	522	530	537	545	552	559	1 0.7
583		567	574	582	589	597	604	612	619	626	634	2 1.4
584		641	649	656	664	671	678	686	693	701	708	3 2.1
585		716	723	730	738	745	753	760	768	775	782	4 2.8
586		790	797	805	812	819	827	834	842	849	856	5 3.5
587		864	871	879	886	893	901	908	916	923	930	6 4.2
588		938	945	953	960	967	975	982	989	997	*004	7 4.9
589	77	012	019	026	034	041	048	056	063	070	078	8 5.6
590		085	093	100	107	115	122	129	137	144	151	9 6.3
591		159	166	173	181	188	195	203	210	217	225	
592		232	240	247	254	262	269	276	283	291	298	
593		305	313	320	327	335	342	349	357	364	371	
594		379	386	393	401	408	415	422	430	437	444	
595		452	459	466	474	481	488	495	503	510	517	
596		525	532	539	546	554	561	568	576	583	590	
597		597	605	612	619	627	634	641	648	656	663	
598		670	677	685	692	699	706	714	721	728	735	
599		743	750	757	764	772	779	786	793	801	808	
600		815	822	830	837	844	851	859	866	873	880	

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
600	77	815	822	830	837	844	851	859	866	873	880	
601		887	895	902	909	916	924	931	938	945	952	
602		960	967	974	981	988	996	*003	*010	*017	*025	
603	78	032	039	046	053	061	068	075	082	089	097	
604		104	111	118	125	132	140	147	154	161	168	
605		176	183	190	197	204	211	219	226	233	240	8
606		247	254	262	269	276	283	290	297	305	312	1 0.8
607		319	326	333	340	347	355	362	369	376	383	2 1.6
608		390	398	405	412	419	426	433	440	447	455	3 2.4
609		462	469	476	483	490	497	504	512	519	526	4 3.2
610		533	540	547	554	561	569	576	583	590	597	5 4.0
611		604	611	618	625	633	640	647	654	661	668	6 4.8
612		675	682	689	696	704	711	718	725	732	739	7 5.6
613		746	753	760	767	774	781	789	796	803	810	8 6.4
614		817	824	831	838	845	852	859	866	873	880	9 7.2
615		888	895	902	909	916	923	930	937	944	951	
616		958	965	972	979	986	993	*000	*007	*014	*021	
617	79	029	036	043	050	057	064	071	078	085	092	
618		099	106	113	120	127	134	141	148	155	162	
619		169	176	183	190	197	204	211	218	225	232	
620		239	246	253	260	267	274	281	288	295	302	7
621		309	316	323	330	337	344	351	358	365	372	1 0.7
622		379	386	393	400	407	414	421	428	435	442	2 1.4
623		449	456	463	470	477	484	491	498	505	511	3 2.1
624		518	525	532	539	546	553	560	567	574	581	4 2.8
625		588	595	602	609	616	623	630	637	644	650	5 3.5
626		657	664	671	678	685	692	699	706	713	720	6 4.2
627		727	734	741	748	754	761	768	775	782	789	7 4.9
628		796	803	810	817	824	831	837	844	851	858	8 5.6
629		865	872	879	886	893	900	906	913	920	927	9 6.3
630		934	941	948	955	962	969	975	982	989	996	
631	80	003	010	017	024	030	037	044	051	058	065	
632		072	079	085	092	099	106	113	120	127	134	
633		140	147	154	161	168	175	182	188	195	202	
634		209	216	223	229	236	243	250	257	264	271	
635		277	284	291	298	305	312	318	325	332	339	6
636		346	353	359	366	373	380	387	393	400	407	1 0.6
637		414	421	428	434	441	448	455	462	468	475	2 1.2
638		482	489	496	502	509	516	523	530	536	543	3 1.8
639		550	557	564	570	577	584	591	598	604	611	4 2.4
640		618	625	632	638	645	652	659	665	672	679	5 3.0
641		686	693	699	706	713	720	726	733	740	747	6 3.6
642		754	760	767	774	781	787	794	801	808	814	7 4.2
643		821	828	835	841	848	855	862	868	875	882	8 4.8
644		889	895	902	909	916	922	929	936	943	949	9 5.4
645		956	963	969	976	983	990	996	*003	*010	*017	
646	81	023	030	037	043	050	057	064	070	077	084	
647		090	097	104	111	117	124	131	137	144	151	
648		158	164	171	178	184	191	198	204	211	218	
649		224	231	238	245	251	258	265	271	278	285	
650		291	298	305	311	318	325	331	338	345	351	

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
650	81	291	298	305	311	318	325	331	338	345	351	
651		358	365	371	378	385	391	398	405	411	418	
652		425	431	438	445	451	458	465	471	478	485	
653		491	498	505	511	518	525	531	538	544	551	
654		558	564	571	578	584	591	598	604	611	617	
655		624	631	637	644	651	657	664	671	677	684	
656		690	697	704	710	717	723	730	737	743	750	
657		757	763	770	776	783	790	796	803	809	816	
658		823	829	836	842	849	856	862	869	875	882	
659		889	895	902	908	915	921	928	935	941	948	
660		954	961	968	974	981	987	994	*000	*007	*014	
661	82	020	027	033	040	046	053	060	066	073	079	7
662		086	092	099	105	112	119	125	132	138	145	1 0.7
663		151	158	164	171	178	184	191	197	204	210	2 1.4
664		217	223	230	236	243	249	256	263	269	276	3 2.1
665		282	289	295	302	308	315	321	328	334	341	4 2.8
666		347	354	360	367	373	380	387	393	400	406	5 3.5
667		413	419	426	432	439	445	452	458	465	471	6 4.2
668		478	484	491	497	504	510	517	523	530	536	7 4.9
669		543	549	556	562	569	575	582	588	595	601	8 5.6
670		607	614	620	627	633	640	646	653	659	666	9 6.3
671		672	679	685	692	698	705	711	718	724	730	
672		737	743	750	756	763	769	776	782	789	795	
673		802	808	814	821	827	834	840	847	853	860	
674		866	872	879	885	892	898	905	911	918	924	
675		930	937	943	950	956	963	969	975	982	988	
676		995	*001	*008	*014	*020	*027	*033	*040	*046	*052	
677	83	059	065	072	078	085	091	097	104	110	117	
678		123	129	136	142	149	155	161	168	174	181	
679		187	193	200	206	213	219	225	232	238	245	
680		251	257	264	270	276	283	289	296	302	308	
681		315	321	327	334	340	347	353	359	366	372	6
682		378	385	391	398	404	410	417	423	429	436	1 0.6
683		442	448	455	461	467	474	480	487	493	499	2 1.2
684		506	512	518	525	531	537	544	550	556	563	3 1.8
685		569	575	582	588	594	601	607	613	620	626	4 2.4
686		632	639	645	651	658	664	670	677	683	689	5 3.0
687		696	702	708	715	721	727	734	740	746	753	6 3.6
688		759	765	771	778	784	790	797	803	809	816	7 4.2
689		822	828	835	841	847	853	860	866	872	879	8 4.8
690		885	891	897	904	910	916	923	929	935	942	9 5.4
691		948	954	960	967	973	979	985	992	998	*004	
692	84	011	017	023	029	036	042	048	055	061	067	
693		073	080	086	092	098	105	111	117	123	130	
694		136	142	148	155	161	167	173	180	186	192	
695		198	205	211	217	223	230	236	242	248	255	
696		261	267	273	280	286	292	298	305	311	317	
697		323	330	336	342	348	354	361	367	373	379	
698		386	392	398	404	410	417	423	429	435	442	
699		448	454	460	466	473	479	485	491	497	504	
700		510	516	522	528	535	541	547	553	559	566	

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
700	84	510	516	522	528	535	541	547	553	559	566	
701		572	578	584	590	597	603	609	615	621	628	
702		634	640	646	652	658	665	671	677	683	689	
703		696	702	708	714	720	726	733	739	745	751	
704		757	763	770	776	782	788	794	800	807	813	
705		819	825	831	837	844	850	856	862	868	874	
706		880	887	893	899	905	911	917	924	930	936	7
707		942	948	954	960	967	973	979	985	991	997	1 0.7
708	85	003	009	016	022	028	034	040	046	052	058	2 1.4
709		065	071	077	083	089	095	101	107	114	120	3 2.1
710		126	132	138	144	150	156	163	169	175	181	4 2.8
711		187	193	199	205	211	217	224	230	236	242	5 3.5
712		248	254	260	266	272	278	285	291	297	303	6 4.2
713		309	315	321	327	333	339	345	352	358	364	7 4.9
714		370	376	382	388	394	400	406	412	418	425	8 5.6
715		431	437	443	449	455	461	467	473	479	485	9 6.3
716		491	497	503	509	516	522	528	534	540	546	
717		552	558	564	570	576	582	588	594	600	606	
718		612	618	625	631	637	643	649	655	661	667	
719		673	679	685	691	697	703	709	715	721	727	
720		733	739	745	751	757	763	769	775	781	788	6
721		794	800	806	812	818	824	830	836	842	848	1 0.6
722		854	860	866	872	878	884	890	896	902	908	2 1.2
723		914	920	926	932	938	944	950	956	962	968	3 1.8
724		974	980	986	992	998	*004	*010	*016	*022	*028	4 2.4
725	86	034	040	046	052	058	064	070	076	082	088	5 3.0
726		094	100	106	112	118	124	130	136	141	147	6 3.6
727		153	159	165	171	177	183	189	195	201	207	7 4.2
728		213	219	225	231	237	243	249	255	261	267	8 4.8
729		273	279	285	291	297	303	308	314	320	326	9 5.4
730		332	338	344	350	356	362	368	374	380	386	
731		392	398	404	410	415	421	427	433	439	445	
732		451	457	463	469	475	481	487	493	499	504	
733		510	516	522	528	534	540	546	552	558	564	
734		570	576	581	587	593	599	605	611	617	623	
735		629	635	641	646	652	658	664	670	676	682	5
736		688	694	700	705	711	717	723	729	735	741	1 0.5
737		747	753	759	764	770	776	782	788	794	800	2 1.0
738		806	812	817	823	829	835	841	847	853	859	3 1.5
739		864	870	876	882	888	894	900	906	911	917	4 2.0
740		923	929	935	941	947	953	958	964	970	976	5 2.5
741		982	988	994	999	*005	*011	*017	*023	*029	*035	6 3.0
742	87	040	046	052	058	064	070	075	081	087	093	7 3.5
743		099	105	111	116	122	128	134	140	146	151	8 4.0
744		157	163	169	175	181	186	192	198	204	210	9 4.5
745		216	221	227	233	239	245	251	256	262	268	
746		274	280	286	291	297	303	309	315	320	326	
747		332	338	344	349	355	361	367	373	379	384	
748		390	396	402	408	413	419	425	431	437	442	
749		448	454	460	466	471	477	483	489	495	500	
750		506	512	518	523	529	535	541	547	552	558	

Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
750	87	506	512	518	523	529	535	541	547	552	558	
751		564	570	576	581	587	593	599	604	610	616	
752		622	628	633	639	645	651	656	662	668	674	
753		679	685	691	697	703	708	714	720	726	731	
754		737	743	749	754	760	766	772	777	783	789	
755		795	800	806	812	818	823	829	835	841	846	
756		852	858	864	869	875	881	887	892	898	904	
757		910	915	921	927	933	938	944	950	955	961	
758		967	973	978	984	990	996	*001	*007	*013	*018	
759	88	024	030	036	041	047	053	058	064	070	076	
760		081	087	093	098	104	110	116	121	127	133	6
761		138	144	150	156	161	167	173	178	184	190	1 0.6
762		195	201	207	213	218	224	230	235	241	247	2 1.2
763		252	258	264	270	275	281	287	292	298	304	3 1.8
764		309	315	321	326	332	338	343	349	355	360	4 2.4
765		366	372	377	383	389	395	400	406	412	417	5 3.0
766		423	429	434	440	446	451	457	463	468	474	6 3.6
767		480	485	491	497	502	508	513	519	525	530	7 4.2
768		536	542	547	553	559	564	570	576	581	587	8 4.8
769		593	598	604	610	615	621	627	632	638	643	9 5.4
770		649	655	660	666	672	677	683	689	694	700	
771		705	711	717	722	728	734	739	745	750	756	
772		762	767	773	779	784	790	795	801	807	812	
773		818	824	829	835	840	846	852	857	863	868	
774		874	880	885	891	897	902	908	913	919	925	
775		930	936	941	947	953	958	964	969	975	981	
776		986	992	997	*003	*009	*014	*020	*025	*031	*037	
777	89	042	048	053	059	064	070	076	081	087	092	
778		098	104	109	115	120	126	131	137	143	148	
779		154	159	165	170	176	182	187	193	198	204	
780		209	215	221	226	232	237	243	248	254	260	5
781		265	271	276	282	287	293	298	304	310	315	1 0.5
782		321	326	332	337	343	348	354	360	365	371	2 1.0
783		376	382	387	393	398	404	409	415	421	426	3 1.5
784		432	437	443	448	454	459	465	470	476	481	4 2.0
785		487	492	498	504	509	515	520	526	531	537	5 2.5
786		542	548	553	559	564	570	575	581	586	592	6 3.0
787		597	603	609	614	620	625	631	636	642	647	7 3.5
788		653	658	664	669	675	680	686	691	697	702	8 4.0
789		708	713	719	724	730	735	741	746	752	757	9 4.5
790		763	768	774	779	785	790	796	801	807	812	
791		818	823	829	834	840	845	851	856	862	867	
792		873	878	883	889	894	900	905	911	916	922	
793		927	933	938	944	949	955	960	966	971	977	
794		982	988	993	998	*004	*009	*015	*020	*026	*031	
795	90	037	042	048	053	059	064	069	075	080	086	
796		091	097	102	108	113	119	124	129	135	140	
797		146	151	157	162	168	173	179	184	189	195	
798		200	206	211	217	222	227	233	238	244	249	
799		255	260	266	271	276	282	287	293	298	304	
800		309	314	320	325	331	336	342	347	352	358	



Tables of Logarithms

N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
800	90	309	314	320	325	331	336	342	347	352	358	
801		363	369	374	380	385	390	396	401	407	412	
802		417	423	428	434	439	445	450	455	461	466	
803		472	477	482	488	493	499	504	509	515	520	
804		526	531	536	542	547	553	558	563	569	574	
805		580	585	590	596	601	607	612	617	623	628	
806		634	639	644	650	655	660	666	671	677	682	
807		687	693	698	703	709	714	720	725	730	736	
808		741	747	752	757	763	768	773	779	784	789	
809		795	800	806	811	816	822	827	832	838	843	
810		849	854	859	865	870	875	881	886	891	897	6
811		902	907	913	918	924	929	934	940	945	950	1 0.6
812		956	961	966	972	977	982	988	993	998	*004	2 1.2
813	91	009	014	020	025	030	036	041	046	052	057	3 1.8
814		062	068	073	078	084	089	094	100	105	110	4 2.4
815		116	121	126	132	137	142	148	153	158	164	5 3.0
816		169	174	180	185	190	196	201	206	212	217	6 3.6
817		222	228	233	238	243	249	254	259	265	270	7 4.2
818		275	281	286	291	297	302	307	312	318	323	8 4.8
819		328	334	339	344	350	355	360	365	371	376	9 5.4
820		381	387	392	397	403	408	413	418	424	429	
821		434	440	445	450	455	461	466	471	477	482	
822		487	492	498	503	508	514	519	524	529	535	
823		540	545	551	556	561	566	572	577	582	587	
824		593	598	603	609	614	619	624	630	635	640	
825		645	651	656	661	666	672	677	682	687	693	
826		698	703	709	714	719	724	730	735	740	745	
827		751	756	761	766	772	777	782	787	793	798	
828		803	808	814	819	824	829	834	840	845	850	
829		855	861	866	871	876	882	887	892	897	903	
830		908	913	918	924	929	934	939	944	950	955	5
831		960	965	971	976	981	986	991	997	*002	*007	1 0.5
832	92	012	018	023	028	033	038	044	049	054	059	2 1.0
833		065	070	075	080	085	091	096	101	106	111	3 1.5
834		117	122	127	132	137	143	148	153	158	163	4 2.0
835		169	174	179	184	189	195	200	205	210	215	5 2.5
836		221	226	231	236	241	247	252	257	262	267	6 3.0
837		273	278	283	288	293	298	304	309	314	319	7 3.5
838		324	330	335	340	345	350	355	361	366	371	8 4.0
839		376	381	387	392	397	402	407	412	418	423	9 4.5
840		428	433	438	443	449	454	459	464	469	474	
841		480	485	490	495	500	505	511	516	521	526	
842		531	536	542	547	552	557	562	567	572	578	
843		583	588	593	598	603	609	614	619	624	629	
844		634	639	645	650	655	660	665	670	675	681	
845		686	691	696	701	706	711	716	722	727	732	
846		737	742	747	752	758	763	768	773	778	783	
847		788	793	799	804	809	814	819	824	829	834	
848		840	845	850	855	860	865	870	875	881	886	
849		891	896	901	906	911	916	921	927	932	937	
850		942	947	952	957	962	967	973	978	983	988	

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N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
850	92	942	947	952	957	962	967	973	978	983	988	
851		993	998	*003	*008	*013	*018	*024	*029	*034	*039	
852	93	044	049	054	059	064	069	075	080	085	090	
853		095	100	105	110	115	120	125	131	136	141	
854		146	151	156	161	166	171	176	181	186	192	
855		197	202	207	212	217	222	227	232	237	242	6
856		247	252	258	263	268	273	278	283	288	293	1 0.6
857		298	303	308	313	318	323	328	334	339	344	2 1.2
858		349	354	359	364	369	374	379	384	389	394	3 1.8
859		399	404	409	414	420	425	430	435	440	445	4 2.4
860		450	455	460	465	470	475	480	485	490	495	5 3.0
861		500	505	510	515	520	526	531	536	541	546	6 3.6
862		551	556	561	566	571	576	581	586	591	596	7 4.2
863		601	606	611	616	621	626	631	636	641	646	8 4.8
864		651	656	661	666	671	676	682	687	692	697	9 5.4
865		702	707	712	717	722	727	732	737	742	747	
866		752	757	762	767	772	777	782	787	792	797	
867		802	807	812	817	822	827	832	837	842	847	
868		852	857	862	867	872	877	882	887	892	897	
869		902	907	912	917	922	927	932	937	942	947	
870		952	957	962	967	972	977	982	987	992	997	
871	94	002	007	012	017	022	027	032	037	042	047	5
872		052	057	062	067	072	077	082	086	091	096	1 0.5
873		101	106	111	116	121	126	131	136	141	146	2 1.0
874		151	156	161	166	171	176	181	186	191	196	3 1.5
875		201	206	211	216	221	226	231	236	240	245	4 2.0
876		250	255	260	265	270	275	280	285	290	295	5 2.5
877		300	305	310	315	320	325	330	335	340	345	6 3.0
878		349	354	359	364	369	374	379	384	389	394	7 3.5
879		399	404	409	414	419	424	429	433	438	443	8 4.0
880		448	453	458	463	468	473	478	483	488	493	9 4.5
881		498	503	507	512	517	522	527	532	537	542	
882		547	552	557	562	567	571	576	581	586	591	
883		596	601	606	611	616	621	626	630	635	640	
884		645	650	655	660	665	670	675	680	685	689	
885		694	699	704	709	714	719	724	729	734	738	
886		743	748	753	758	763	768	773	778	783	787	4
887		792	797	802	807	812	817	822	827	832	836	1 0.4
888		841	846	851	856	861	866	871	876	880	885	2 0.8
889		890	895	900	905	910	915	919	924	929	934	3 1.2
890		939	944	949	954	959	963	968	973	978	983	4 1.6
891		988	993	998	*002	*007	*012	*017	*022	*027	*032	5 2.0
892	95	036	041	046	051	056	061	066	071	075	080	6 2.4
893		085	090	095	100	105	109	114	119	124	129	7 2.8
894		134	139	143	148	153	158	163	168	173	177	8 3.2
895		182	187	192	197	202	207	211	216	221	226	9 3.6
896		231	236	240	245	250	255	260	265	270	274	
897		279	284	289	294	299	303	308	313	318	323	
898		328	332	337	342	347	352	357	361	366	371	
899		376	381	386	390	395	400	405	410	415	419	
900		424	429	434	439	444	448	453	458	463	468	

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N.	L.	0	1	2	3	4	5	6	7	8	9	P. P.
900	95	424	429	434	439	444	448	453	458	463	468	5 1 0.5 2 1.0 3 1.5 4 2.0 5 2.5 6 3.0 7 3.5 8 4.0 9 4.5
901		472	477	482	487	492	497	501	506	511	516	
902		521	525	530	535	540	545	550	554	559	564	
903		569	574	578	583	588	593	598	602	607	612	
904		617	622	626	631	636	641	646	650	655	660	
905		665	670	674	679	684	689	694	698	703	708	
906		713	718	722	727	732	737	742	746	751	756	
907		761	766	770	775	780	785	789	794	799	804	
908		809	813	818	823	828	832	837	842	847	852	
909		856	861	866	871	875	880	885	890	895	899	
910		904	909	914	918	923	928	933	938	942	947	4 1 0.4 2 0.8 3 1.2 4 1.6 5 2.0 6 2.4 7 2.8 8 3.2 9 3.6
911		952	957	961	966	971	976	980	985	990	995	
912		999	*004	*009	*014	*019	*023	*028	*033	*038	*042	
913	96	047	052	057	061	066	071	076	080	085	090	
914		095	099	104	109	114	118	123	128	133	137	
915		142	147	152	156	161	166	171	175	180	185	
916		190	194	199	204	209	213	218	223	227	232	
917		237	242	246	251	256	261	265	270	275	280	
918		284	289	294	298	303	308	313	317	322	327	
919		332	336	341	346	350	355	360	365	369	374	
920		379	384	388	393	398	402	407	412	417	421	3 1 0.3 2 0.7 3 1.1 4 1.5 5 1.9 6 2.3 7 2.7 8 3.1 9 3.5
921		426	431	435	440	445	450	454	459	464	468	
922		473	478	483	487	492	497	501	506	511	515	
923		520	525	530	534	539	544	548	553	558	562	
924		567	572	577	581	586	591	595	600	605	609	
925		614	619	624	628	633	638	642	647	652	656	
926		661	666	670	675	680	685	689	694	699	703	
927		708	713	717	722	727	731	736	741	745	750	
928		755	759	764	769	774	778	783	788	792	797	
929		802	806	811	816	820	825	830	834	839	844	
930		848	853	858	862	867	872	876	881	886	890	2 1 0.2 2 0.4 3 0.6 4 0.8 5 1.0 6 1.2 7 1.4 8 1.6 9 1.8
931		895	900	904	909	914	918	923	928	932	937	
932		942	946	951	956	960	965	970	974	979	984	
933		988	993	997	*002	*007	*011	*016	*021	*025	*030	
934	97	035	039	044	049	053	058	063	067	072	077	
935		081	086	090	095	100	104	109	114	118	123	
936		128	132	137	142	146	151	155	160	165	169	
937		174	179	183	188	192	197	202	206	211	216	
938		220	225	230	234	239	243	248	253	257	262	
939		267	271	276	280	285	290	294	299	304	308	
940		313	317	322	327	331	336	340	345	350	354	1 0.1 1 0.1 2 0.2 3 0.3 4 0.4 5 0.5 6 0.6 7 0.7 8 0.8 9 0.9
941		359	364	368	373	377	382	387	391	396	400	
942		405	410	414	419	424	428	433	437	442	447	
943		451	456	460	465	470	474	479	483	488	493	
944		497	502	506	511	516	520	525	529	534	539	
945		543	548	552	557	562	566	571	575	580	585	
946		589	594	598	603	607	612	617	621	626	630	
947		635	640	644	649	653	658	663	667	672	676	
948		681	685	690	695	699	704	708	713	717	722	
949		727	731	736	740	745	749	754	759	763	768	
950		772	777	782	786	791	795	800	804	809	813	

Tables of Logarithms

N.	L.	o	1	2	3	4	5	6	7	8	9	P. P.
950	97	772	777	782	786	791	795	800	804	809	813	5 1 0.5 2 1.0 3 1.5 4 2.0 5 2.5 6 3.0 7 3.5 8 4.0 9 4.5
951		818	823	827	832	836	841	845	850	855	859	
952		864	868	873	877	882	886	891	896	900	905	
953		909	914	918	923	928	932	937	941	946	950	
954		955	959	964	968	973	978	982	987	991	996	
955	98	000	005	009	014	019	023	028	032	037	041	
956		046	050	055	059	064	068	073	078	082	087	
957		091	096	100	105	109	114	118	123	127	132	
958		137	141	146	150	155	159	164	168	173	177	
959		182	186	191	195	200	204	209	214	218	223	
960		227	232	236	241	245	250	254	259	263	268	4 1 0.4 2 0.8 3 1.2 4 1.6 5 2.0 6 2.4 7 2.8 8 3.2 9 3.6
961		272	277	281	286	290	295	299	304	308	313	
962		318	322	327	331	336	340	345	349	354	358	
963		363	367	372	376	381	385	390	394	399	403	
964		408	412	417	421	426	430	435	439	444	448	
965		453	457	462	466	471	475	480	484	489	493	
966		498	502	507	511	516	520	525	529	534	538	
967		543	547	552	556	561	565	570	574	579	583	
968		588	592	597	601	605	610	614	619	623	628	
969		632	637	641	646	650	655	659	664	668	673	
970		677	682	686	691	695	700	704	709	713	717	3 1 0.3 2 0.7 3 1.1 4 1.5 5 1.9 6 2.3 7 2.7 8 3.1 9 3.5
971		722	726	731	735	740	744	749	753	758	762	
972		767	771	776	780	784	789	793	798	802	807	
973		811	816	820	825	829	834	838	843	847	851	
974		856	860	865	869	874	878	883	887	892	896	
975		900	905	909	914	918	923	927	932	936	941	
976		945	949	954	958	963	967	972	976	981	985	
977		989	994	998	*003	*007	*012	*016	*021	*025	*029	
978	99	034	038	043	047	052	056	061	065	069	074	
979		078	083	087	092	096	100	105	109	114	118	
980		123	127	131	136	140	145	149	154	158	162	2 1 0.2 2 0.6 3 1.0 4 1.4 5 1.8 6 2.2 7 2.6 8 3.0 9 3.4
981		167	171	176	180	185	189	193	198	202	207	
982		211	216	220	224	229	233	238	242	247	251	
983		255	260	264	269	273	277	282	286	291	295	
984		300	304	308	313	317	322	326	330	335	339	
985		344	348	352	357	361	366	370	374	379	383	
986		388	392	396	401	405	410	414	419	423	427	
987		432	436	441	445	449	454	458	463	467	471	
988		476	480	484	489	493	498	502	506	511	515	
989		520	524	528	533	537	542	546	550	555	559	
990		564	568	572	577	581	585	590	594	599	603	1 1 0.1 2 0.5 3 0.9 4 1.3 5 1.7 6 2.1 7 2.5 8 2.9 9 3.3
991		607	612	616	621	625	629	634	638	642	647	
992		651	656	660	664	669	673	677	682	686	691	
993		695	699	704	708	712	717	721	726	730	734	
994		739	743	747	752	756	760	765	769	774	778	
995		782	787	791	795	800	804	808	813	817	822	
996		826	830	835	839	843	848	852	856	861	865	
997		870	874	878	883	887	891	896	900	904	909	
998		913	917	922	926	930	935	939	944	948	952	
999		957	961	965	970	974	978	983	987	991	996	
1000	00	000	004	009	013	017	022	026	030	035	039	







